YOKING UNEQUAL OXEN:

ORGANIZING FORCES FOR DISSIMILAR MISSIONS

BY

KEVIN L. PARKER, LtCol, USAF

A THESIS PRESENTED TO THE FACULTY OF

THE SCHOOL OF ADVANCED AIR AND SPACE STUDIES

FOR COMPLETION OF GRADUATION REQUIREMENTS

Digital Collections
Air University–Maxwell AFB, AL

SCHOOL OF ADVANCED AIR AND SPACE STUDIES

AIR UNIVERSITY

MAXWELL AIR FORCE BASE, ALABAMA

JUNE 2012

DISTRIBUTION A. Approved for public release: distribution unlimited.

APPROVAL

The undersigned certify that this thesis meets master's-level standards of research, argumentation, and expression.

_____

COL MICHAEL W. KOMETER (Date)

_____

DR. HAROLD R. WINTON (Date)

Muir S. Fairchild Research Information Center
Digital Collections
Air University–Maxwell AFB, AL

DISCLAIMER

The conclusions and opinions expressed in this document are those of the author. They do not reflect the official position of the US Government, Department of Defense, the United States Air Force, or Air University. In accordance with Air Force Instruction 51-303, it is not copyrighted, but is the property of the United States government.

Muir S. Fairchild Research Information Center
Digital Collections
Air University–Maxwell AFB, AL

ABOUT THE AUTHOR

Lieutenant Colonel Parker, USAF is currently a student at the US Air Force School of Advanced Air and Space Studies. He graduated from Texas A&M University in 1996 with a Bachelor of Science in Civil Engineering and is a registered professional engineer. Lieutenant Colonel Parker has served as a civil engineer officer at squadron, MAJCOM, and HAF levels; career broadened as an Officer Training School instructor; was the Operations Flight Commander at the 1st Civil Engineer Squadron, Langley AFB, Virginia; and has deployed to Saudi Arabia and twice to Iraq. Lt Col Parker holds a Master of Art in Human Resource Development from Webster University and a Master of Military Operational Art and Science from Air University. He was a distinguished graduate of ROTC, Introduction to the Base Civil Engineer Organization Course, Squadron Officer School, and Air Command and Staff College, and completed Air War College by correspondence. He has published articles in the Marine Corps Gazette, PE Magazine, The Wright Stuff, and Air and Space Power Journal. Lieutenant Colonel Parker's next assignment is commander of the 376th Expeditionary Civil Engineer Squadron at the Transit Center at Manas, Kyrgyzstan.

Air University–Maxwell AFB, AL

ACKNOWLEDGMENTS

Although this work has one author, it had many contributors. First, I would like to thank Col Michael Kometer who patiently heard me out before I could even coherently articulate my aim. His Socratic listening helped me work through what I was really after and put shape and direction to the effort. In considering this subject over time, I owe thanks to the faculty and my fellow students at the School of Advanced Air and Space Studies and several colleagues around the Air Force off whom I bounced ideas in pursuit of clarity.

My family provided constant support and a climate better than I ever could have expected. I owe a debt of gratitude to my loving wife whose patience is exceeded only by her kindness. I am also thankful to my children. Since I was at home more than ever over the last year, they had to endure my preoccupation with my work of reading and writing first hand.

Most importantly, I am thankful to the One who directs my paths. For the gifts of experiences, talents, and opportunities which wove together to create these pages and an incredible life, I am humbly grateful.

Fairchild Research Information Center
Air University–Maxwell AFB, AL

ABSTRACT

Organizational structure can have a considerable influence on the success of a military force, especially when adopting a new, dissimilar mission. The term dissimilar mission refers to a task beyond a unit's existing mission essential task list. This study analyzes two case studies, the US Army's adoption of counterinsurgency and the US Air Force's development of intercontinental ballistic missiles (ICBMs). The level in the organizational structure at which differentiation of the new mission takes place is a key element of the analysis.

In 1961, President John F. Kennedy gave the US Army the dissimilar mission of counterinsurgency. Army leaders chose to differentiate the new mission at a low level in its hierarchy. The Army's focus on conventional operations and its institutional inertia hindered the development of counterinsurgency capabilities and structurally subordinated them to the predominant conventional mindset. The Army's force structure decisions differentiated counterinsurgency forces at too low a level to overcome its institutional inertia.

In the 1950s, the US Air Force gained a dissimilar mission to develop and field ICBMs. The Air Force differentiated it at a high level and organized by product. This organizational structure helped overcome institutional inertia, downplayed functional perspectives, and provided additional focus on bringing the weapon system on line. The result was fielding of ICBMs in a remarkably short time.

Analysis of the two case studies provides the following conclusions for organizing military forces for a new, dissimilar mission:

- Incorporating a dissimilar mission into an existing organization rather than creating a new organization provides administrative efficiency. This action leverages existing processes, personnel, leadership, and administration leading to quicker action.
- Institutional inertia is a powerful factor in organizational change, especially when an established military activity is concerned.
- Horizontal differentiation of a dissimilar mission must occur at a sufficiently high level to insulate it from the adverse effects of institutional inertia.

CONTENTS

Air S. Muchild Research Information Center
Digital Collections
Air University–Maxwell AFB, AL

Muir S. Fairchild Research Information Center
Digital Collections
Air University–Maxwell AFB, AL

Introduction

Organizing forces is a key responsibility of the military services and joint force commanders.[1] How leaders organize their forces can influence their chances for success. One key aspect of organizing is specialization. Modern forces, due to advanced technologies and a wide spectrum of conflict, have an unprecedented degree of specialization. However, the concept of specialization is nothing new, and how leaders integrate or differentiate specialized capabilities into an organization can contribute to success of failure.

Exploiting specialized forces in military organizations is observable throughout history. By the fourth century, BC, Sparta had turned societal specialization into military advantage by using coerced laborers for farming and other tasks so its citizens could focus on military service. The basic Spartan fighting unit, like that of most Greek city-states, was the phalanx of tightly packed, heavily armed infantry. Little specialization existed among its rows. Although the phalanx was a powerful force on the battlefield, its prowess did not last. Alexander the Great won fame and victory over the Greek system by employing infantry, archers, and light cavalry. Alexander organized, trained, and equipped separate portions of his force with specialized weapons, skills, and methods in order to combine them on the battlefield for powerful effect. [2]

Diverse technologies, domains, and operational concepts provide opportunities for specialization for dissimilar missions. The technological invention of the stirrup, for example, enabled shock combat by more heavily armored cavalry in the Middle Ages.[3] Technological progress through history ushered in more opportunities for specialization

---

[1] Joint Publication (JP) 1, *Doctrine for the Armed Forces of the United States*, 2 May 2007 with Change 1 20 March 2009, I-15, V-2.
[2] Michael S. Neiberg, *Warfare in World History* (New York: Routledge, 2001), 10-11.
[3] Lynn White, Jr., *Medieval Technology and Social Change* (New York: Oxford University Press, 1962), 2.

with the crossbow, artillery, tanks, airplanes, and other inventions. Operating in various domains, such as land, sea, air, space, and cyberspace, requires different capabilities. Different operational concepts also create opportunities for specialization. The skills needed for light cavalry and heavy armor operations differ so greatly they are hardly comparable. The same could be said of irregular warfare and nuclear deterrence. The broad range of operational concepts requires many areas of specialization. Whatever the source, the need for specialization can create dissimilar missions.

Defining Dissimilar Missions

The term dissimilar mission used here will refer only to a new task beyond a unit's existing mission essential task list. Adopting a dissimilar mission may require acting on fundamentally different lines of effort.[4] Dissimilar missions may also be implied tasks that require special attention due to unique circumstances. Major innovations in weapon systems or doctrinal concepts can also constitute dissimilar missions.[5] Degrees of dissimilitude are always debatable, but historical and contemporary examples of dissimilar missions are shown in Table 1.

---

[4] Joint Publication 5-0, Joint Operation Planning, defines lines of effort as "In the context of joint operation planning, using the purpose to focus efforts toward establishing operational and strategic conditions by linking multiple tasks and mission." Examples of varying lines of effort could include ground operations designed to seize key terrain, air operations designed to interdict supply routes, or combined arms operations designed to provide population security.

[5] Stephen Rosen defines major innovation as "a change in one of the primary combat arms of a service in the way it fights or alternatively, as the creation of a new combat arm . . . [and] a change in the relation of that combat arm to other combat arms and a downgrading or abandoning of older concepts of operation and possibly of a formerly dominant weapon." This paper considers Rosen's definition to be a type of dissimilar mission and expands it to include innovations worthy of considering an organizational change, even if the change does not take place. See Stephen Peter Rosen, *Winning the Next War: Innovation and the Modern Military* (Ithaca, NY: Cornell University Press, 1991), 7-8.

Table 1. Historical and Contemporary Examples of Dissimilar Missions

Source: Author's original work

Historical	Contemporary
Military operations on land supported from the air (artillery spotting in WWI)	Military operations supported through cyberspace (24th Air Force)[6]
Tactical and strategic airpower (Tactical Air Command and Strategic Air Command)	Nuclear and conventional operations (AF Global Strike Command and other major commands)
Operations in air and space (USAF air operations and satellite launches)	Manned and unmanned aerial vehicles (U-2 and Global Hawk)
Occupation forces in one area with combat operations in adjacent areas (Allied occupation of Italy in World War II)	Humanitarian assistance with adjacent combat operations ("Three Block War" in Afghanistan)[7]
Security operations and foreign internal defense advise/train/assisting (Operation Iraqi Freedom: MNC-I and MNSTC-I)	Counterinsurgency and counterterrorism operations in the same area (Operation Enduring Freedom in Afghanistan)

Organizing, the first step in organizing, training, and equipping a force, translates concept into action. Organizing represents conscious decisions with great potential influence on success or failure. Due to the potential consequences, incorporating emerging specialties in the form of dissimilar missions into a military force requires forethought and careful decisions. The purpose of this paper is to provide principles to assist leaders with organizing military forces to incorporate new, dissimilar missions.

General Rupert Smith observed that every operation in his 40 years in the British Army required "change[ing] our method and reorganize[ing] in order to succeed." He claimed, "Until this was done we

[6] "The US military's ability to use cyberspace . . . in support of operations is a critical enabler of DOD missions." Department of Defense, *Department of Defense Strategy for Operating in Cyberspace* (Washington, DC: Secretary of Defense, July 2011), 2.
[7] Joseph J. Collins, "Afghanistan: Winning a Three Block War," *The Journal of Conflict Studies* 24, no. 2 (2004): 61.

could not use our force effectively."[8] The general considers "this as a normal—a necessary part of every operation."[9] The commonness of the term "coalition of the willing" and multitude of joint task forces in Iraq and Afghanistan reinforce the point that ad hoc organizations are today's norm. If organizing a force requires spontaneous implementation in the midst of conflict, decision makers should have a set of organizing principles on which they can rely.

Even in peacetime, the organization of US armed forces is far from static. The organization has been altered many times in over two centuries as operations have expanded into new domains, incorporated new weapons, and implemented emerging operational concepts. There has been no lack of congressional interest and testimony over how best to organize the armed forces for the defense of the nation. In response to dissimilar missions, the United States has at different times created new services or incorporated new functions into existing services.

Even at the service level, organizations have evolved over time due to dissimilar missions. For example, Continental Air Forces, established in 1944, became Strategic Air Command (SAC) in 1946 to focus on strategic, long-range operations, especially with nuclear weapons. SAC, which also contained its own aerial refueling fleet and the intercontinental ballistic missile (ICBM) force, had responsibility for all Air Force (AF) long-range nuclear capabilities. SAC's organization was characterized by a focus on product. Amid changes in the geopolitical environment, the Air Force disbanded SAC and shifted to a function-based organization by sending its bombers to Air Combat Command, ICBMs to AF Space Command, and refueling aircraft to Air Mobility Command.[10] In 2009, citing "long-standing systemic and institutional

---

[8] General Rupert Smith, *The Utility of Force: The Art of War in the Modern World* (New York: Vintage, 2007), x.
[9] Smith, *The Utility of Force*, x.
[10] Air Force Historical Research Agency, "Air Force Space Command Fact Sheet," 24 July 2008, http://www.afhra.af.mil/factsheets/factsheet.asp?id=10995; Air Force

weaknesses in . . . stewardship of nuclear matters," the Air Force activated AF Global Strike Command to return all long-range nuclear-equipped bombers and ICBMS to one major command specializing in delivery of nuclear weapons.[11] In each reorganization, AF senior leaders made force structure decisions to meet their objectives at the time.

The applicability of the lessons in this paper does not stop at the service level but spans the entire defense establishment. Leaders at all levels can benefit from considering the advantages and consequences of organizing by geography, function, or product. Furthermore, understanding the impact of specializing at different levels in an organization can help leaders to understand the limitations and likely outcomes of their decisions. These concepts are just as applicable to a company commander or a service chief as they are to a congressman or a secretary of defense. Anytime a leader wants increased emphasis on an activity, reorganization offers a potential solution.

The future holds multiple opportunities to challenge existing organizations. Technological advancements, such as unmanned aerial vehicles and directed-energy weapons, offer new opportunities and challenges just as stirrups, tanks, and airplanes did in their days. Even as established domains present new challenges, budding capabilities and applications in space and cyberspace will necessitate organizational decisions that will either advance or impede them. Debate over cyberspace force structure has resulted in the sub-unified command US Cyber Command supported by Army Forces Cyber Command, the Navy's Fleet Cyber Command, Marine Forces Cyber Command, and 24th Air

---

Historical Research Agency, "Air Force Global Strike Command Fact Sheet," 17 July 2009, http://www.afhra.af.mil/factsheets/factsheet.asp?id=15047.

[11]Air Force News Service, "Air Force Nuclear Enterprise Roadmap Report Calls for New Command, Headquarters Agency," *25 October 2008, http://www.af.mil/news/story.asp?id=123121095; TSgt Amaani Lyle, "Air Force Global Strike Command Activated," 10 August 2009, http://www.af.mil/news/story.asp?id=123162363.*

Force.[12] If this is the best organizational answer for today, will it be the right answer for tomorrow? Airmen flew under many different organizational constructs before the National Security Act of 1947 ended debate over the need to establish an independent air service.[13]

This paper does not recommend a separate service for space or cyberspace. Nor does it recommend abolishing any existing service, major command, or any other organization. Nor does it recommend centralizing or decentralizing mission support operations, headquarters functions, or nuclear operations. Its intent is to provide those who are considering making any such changes several useful principles. Historical analysis suggests there is great value in properly organizing military forces. This study will show that, in some instances, it has contributed significantly to success or failure of dissimilar mission bringing consequential ramifications. With such high stakes, prudence requires evaluating the best way to organize forces when adopting a dissimilar mission.

Limitations

Due to the complexity of interacting influences on a military organization's successes and failures, several scope limitations are necessary for this study. The most important limitation is recognizing that how a force is organized is only one influence among many that contribute to its effectiveness. Martin Van Creveld, after surveying centuries of military command, dismissed the idea of any single principle of organization being determinant in war. He concluded, "No single communications or data processing technology, no single system of organization, no single procedure or method, is in itself sufficient to guarantee the successful or even adequate conduct of command in

[12] Department of Defense, *Cyber Command Fact Sheet* (Washington, DC: Office of Public Affairs, 13 October 2010).
[13] Department of the Air Force, *1907-1947—The Lineage of the US Air Force* (Joint Base Anacostia Bolling, DC: Office of Public Affairs, 13 October 2010); Department of the Air Force, *1947—The National Security Act of 1947* (Joint Base Anacostia Bolling, DC: Office of Public Affairs, 28 April 2011).

war."[14] Further, Clausewitz classified organizing forces as "preparations for war" distinct from "war proper".[15] He then wrote of the uncertainty of everything in war as two enemies interact.[16] Considering his advice, even good preparations and the perfect organizational structure cannot guarantee victory. Accordingly, this study will not attempt to offer a single principle or any "right answer," but will offer several organizing principles for future leaders to consider applying to their unique circumstances. Also, there are several factors worthy of consideration when organizing forces that this paper does not address.

First, personalities can influence organizational decisions. Military historian Conrad Crane considered one of the lessons of American joint operations to be "that doctrine is not as important as personalities in maximizing performance."[17] Because individuals have different strengths, incumbent and potential personalities should be a factor when organizing forces. Although an important factor, this paper will not address personality due to the variability of particular circumstances.

Second, politics have an inevitable influence on organizational decisions. Bureaucratic maneuvering, no matter how distasteful to most observers, is a fact of life in most large organizations.[18] The US armed forces are no strangers to politics. One example is establishment in 1935 of the General Headquarters (GHQ) Air Force, a short-lived organization which predated the independent US Air Force. Its creation was largely seen as a compromise of bureaucratic maneuvering and

---

[14] Martin Van Creveld, *Command in War* (Cambridge, MS: Harvard University Press, 1985), 261.
[15] Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976), 131-132.
[16] Clausewitz, *On War*, 136, 139.
[17] Conrad C. Crane, *American Airpower Strategy in Korea, 1950-1953* (Lawrence, KS: University Press of Kansas, 2000), 183.
[18] Graham Allison and Philip Zelikow offer two models that demonstrate how organizational decisions depart from a rational actor model to follow organizational behavior or governmental politics models. Graham T. Allison and Philip Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis*, 2d ed. (New York: Longman, 1999), 5.

advocacy by enthusiasts for independent air service, the War Department, congressmen, and multiple boards that studied the issue. Although not the final solution air advocates desired, they saw it as an acceptable political compromise and an incremental step toward their goal of eventual independence.[19] Since politics still vary significantly, this paper omits their influence.

Third, organizational structure decisions should consider the need for technically competent leaders. Not all activities can excel, or even survive, when supervised by general managers. Chinese forces discovered this truth in 1951 about their People's Liberation Army Air Force operations in Korea. Air force leaders "lacked air combat experience and thus often made fatal decisions."[20] Recognizing some activities require leadership by experts in the technical aspects of the field, this paper forgoes this subject to keep its conclusions applicable to all mission types.

Fourth, opportunities for promotion can influence support for dissimilar missions. Professor of national security and military affairs Stephen Rosen claimed "a new promotion pathway for junior officers practicing a new way of war" is one factor that can help facilitate a military innovation.[21] He further asserted that a lack of promotion opportunities can stifle support for innovations.[22] To keep within a manageable scope, this study does not address promotion paths for practitioners of dissimilar missions. However, this concept shows merit for potential study.

Fifth, force structure decisions can have short- and long-term effects on an institution. Organizationally insulating a dissimilar mission from the rest of a unit may allow it to flourish despite opposition.

---

[19] DeWitt S. Copp, *A Few Great Captains: The Men and Events That Shaped the Development of US Air Power* (McLean, VA: EPM Publications, 1980), 291-292.
[20] Xiaoming Zhang, *Red Wings over the Yalu: China, the Soviet Union, and the Air War in Korea* (College Station, TX: Texas A&M University Press, 2002), 174.
[21] Rosen, *Winning the Next War*, 251.
[22] Rosen, *Winning the Next War*, 101.

However, no matter how successful it is, the majority of the unit may never embrace the dissimilar mission if it remains organizationally insulated. To keep within a manageable scope, the case studies used here focus primarily on a time span of approximately 10 years. Thus, this study excludes this temporal aspect of dissimilar missions, although it displays potential for future study.

Sixth, military organizations are not bound to traditional hierarchical structures. Matrix organizations, where an individual reports to a functional supervisor and a product-line supervisor, are common in business.[23] A network structure is another organizational alternative. One author suggested modern security challenges require "harnessing the flexibility and adaptability of networks while preserving some hierarchical features" through hybridization.[24] Without discounting their potential, this paper will not address non-hierarchical structures. Despite these limitations, the conclusions drawn from the case studies offer help to decision makers now and in the future for determining how to organize when adopting dissimilar missions.

Areas of Interest

Analysis of the case studies bring to light several areas of interest within the limitations of the study. Leaders organizing forces for a dissimilar mission can incorporate the new mission into an existing organization instead of creating a new organization. This action leverages existing processes, personnel, leadership, and administration, leading to quicker action. One concern of using an existing organization is institutional inertia. Institutional inertia is a powerful factor in organizational change, especially when an established military activity is concerned. Insulating a new mission from being overcome by institutional inertia may be necessary. Additionally, the level of the

[23] Stephen P. Robbins, *Essentials of Organizational Behavior*, 5th ed. (Upper Saddle River, NJ: Prentice Hall, 1997), 193-195.
[24] Antoine Bousquet, *The Scientific Way of Warfare: Order and Chaos on the Battlefields of Modernity* (New York: Columbia University Press, 2009), 210.

organization where horizontal differentiation of a dissimilar mission occurs can contribute to its success or failure.

Methodology

This paper will use a case study methodology. Chapter 2 provides the foundation for terminology and analysis with organizational structures and concepts from sources in management, business, and organizational behavior. Two case studies will highlight historical examples of organizations with dissimilar missions. Chapter 3 covers the first case study on the development of counterinsurgency capabilities in the US Army and their employment in Vietnam. Chapter 4 traces the development of ICBMs in the US Air Force. The final chapter offers conclusions from the case studies.

The case studies were chosen because each involves a military service adopting a new, dissimilar mission, specifically fielding a new capability. Both cases have sufficient historical documentation available to perform analysis. The success of the dissimilar mission varies between the cases. Of interest to this paper is how each organization changed their structure to incorporate its new mission. Additionally, the vertical level of the organizational hierarchy at which horizontal differentiation occurred is notable. This paper contends that the vertical placement of specialization affects the overall success of dissimilar missions.

Chapter 1

Understanding Organizational Structures

Most military members are familiar with organizational charts. Often, they are able to find where their position lies among the cascade of lines and boxes. Few, however, have the opportunity to build an organization or conduct a major re-structuring. Effective organizational design requires an understanding of management and organizational behavior principles. This chapter will examine several principles of organizational design to prepare the reader for terminology used in the case studies and analysis.

Stephen Robbins, author of a widely used text on organizational behavior, claimed different organizational structures can impact the attitudes and behaviors of employees. He furthermore concluded that structures can explain and predict employee behavior.[1] If he is accurate, managers considering changes to an organizational structure must consider the likely effects. Thus, any organization adopting a new, dissimilar mission should very carefully consider whether structural changes are warranted and assess their potential outcomes.

Robbins offered several elements to consider when designing an organizational structure. They are "work specialization, departmentalization, chain of command, span of control, centralization and decentralization, and formalization."[2] Two of these elements, specialization and departmentalization, form the basis of analysis for this paper. These two were chosen because they can be manipulated by managers at any level in a military organization. Military institutions typify the organizational design of a bureaucracy. Bureaucracies

---

[1] Stephen P. Robbins, *Essentials of Organizational Behavior*, 5th ed. (Upper Saddle River, NJ: Prentice Hall, 1997), 184, 202.
[2] Robbins, *Essentials of Organizational Behavior*, 185.

typically have "highly routine operating tasks achieved through specialization, very formalized rules and regulations, tasks that are grouped into functional departments, centralized authority, narrow spans of control, and decision making that follows the chain of command."[3] Addressing alternatives to strict command chains, spans of control, centralization, or formalization would be beyond the scope of this study. However, adjusting the degree of specialization and the method of departmentalization can fall within the normal purview of military leaders at all levels. It is thus important to define clearly specialization and departmentalization, the key elements of this study.

Specialization

Work specialization is a division of labor designed to dedicate individuals or units to performing part of an activity rather than the entire activity. Instead of having one individual take on an entire body of work from start to finish, they concentrate on performing only a part of it and leaving the remaining parts to other specialized individuals or units.[4] Specialization is evident in the example of Spartan citizen warriors. Each member of the society did not perform all the functions necessary to sustain it. The warriors honed their military skills while leaving farming to their impressed laborers. The terms specialization and differentiation share meanings and will be used interchangeably in this paper.[5]

Within an organization, specialization has both vertical and horizontal dimensions, relative to other units in the organization. Two units are vertically differentiated when a new, subordinate department forms under an existing one to perform a smaller subset of a task, job, or mission. Two units are horizontally differentiated when they perform

---

[3] Robbins, *Essentials of Organizational Behavior*, 193.
[4] Robbins, *Essentials of Organizational Behavior*, 185.
[5] Burt Scanlan and J. Bernard Keys, *Management and Organizational Behavior* (New York: John Wiley & Sons, 1979), 84.

different subsets of a task but at the same hierarchical level.[6] Figure 1 shows how differentiation in an organizational chart is simply adding a new box. Figure 2 highlights the vertical dimension of an organizational hierarchy. Horizontal differentiation can take place at any vertical level.

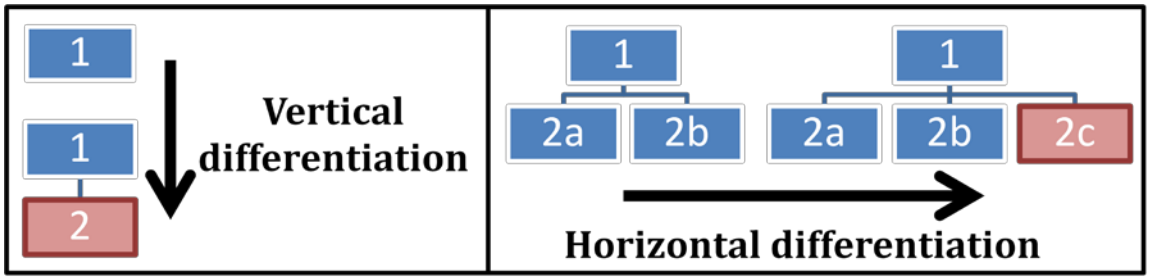

Figure 1: Vertical and Horizontal Differentiation
Source: Author's original work

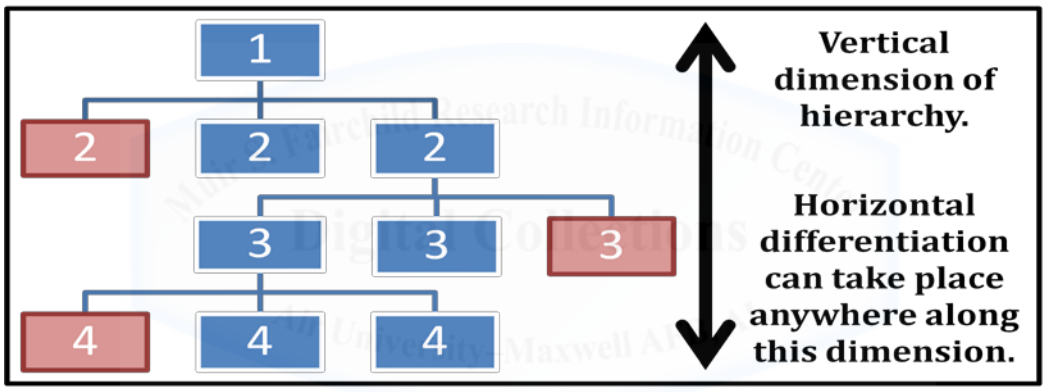

Figure 2: Horizontal Differentiation at Varying Levels
Source: Author's original work

Specialization is necessary in large organizations and has advantages and disadvantages. The advantage of specialization is efficiency, as groups focus on only specific tasks. The Ford assembly line offers a classic example of specialization. Each worker on the line installed a specific part repetitively, so he became efficient at installing that part without having to understand how to assemble the entire car.[7]

---

[6] Arthur Elkins, *Management: Structures, Functions, Practices* (Reading, MA: Addison-Wesley, 1980), 37-39.
[7] Robbins, *Essentials of Organizational Behavior*, 185.

The term differentiation suggests one of its disadvantages. By providing a unit the ability to focus on a certain part of an activity, its focus primarily becomes that different activity alone. Specialization limits the ability of members in a differentiated unit to conceptualize larger organizational goals and the contributions of other departments. The necessary function of coordinating the activities of multiple differentiated departments is called integration.[8] Integration is possible through department leaders cooperating with each other or the next higher step in the organizational hierarchy.

Another disadvantage occurs when organizations are overly specialized. When taken too far, specialization can cause diseconomies.[9] An example of over-specialization would be an office with three separate departments for making copies, stapling papers, and punching holes. The time required in integrating those activities and transferring papers between them would eclipse any efficiency gained from their specialization.

Departmentalization

Departmentalization is simply the grouping of activities.[10] Departmentalization can only take place after major tasks have been thoroughly divided into specialized sub-tasks. After that takes place, forming departments organizes the interactions of each task. It enables the coordination of common tasks within departments. Organizations can choose for many available departmentalizing methodologies. They include organizing by geography, function, product, process, or customer.[11] Each method has its own advantages and disadvantages.

Departmentalizing by *geography* is grouping activities among regions of a map. Using this method, a department would be responsible for performing tasks taking place within an assigned geographical area.

---

[8] Scanlan and Keys, *Management and Organizational Behavior*, 84.
[9] Robbins, *Essentials of Organizational Behavior*, 185.
[10] Scanlan and Keys, *Management and Organizational Behavior*, 83.
[11] Robbins, *Essentials of Organizational Behavior*, 186-188.

This method allows for individuals to account for regionally unique challenges and opportunities. Its disadvantage is the duplication of functions that otherwise could be consolidated across all regions. An example is Multi-National Corps-Iraq's (MNC-I) division of Iraq into areas of operation for its major subordinate commands. See Figure 3.

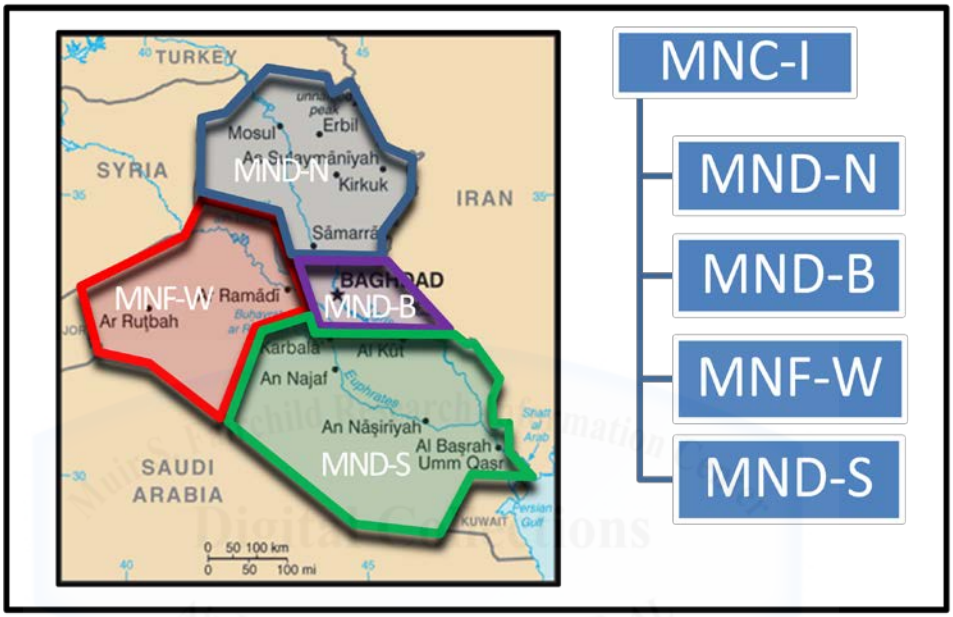

Figure 3: Multi-National Corps-Iraq Departmentalized by Geography
Areas of operation boundaries are shown only in a representative manner and are not intended to accurately reflect their actual geographic location at any time.
Source: Basic map from CIA World Factbook—Iraq. Remainder is author's original work.

Departmentalizing by *function* groups employees together based on the type of work they perform. Functions vary across organizations but may include such activities as accounting, contracting, researching, selling, and manufacturing. Advantages of functional organizations include efficiency from grouping expertise in certain fields and development of specific skills in the workforce.[12] Drawbacks of

[12] Robbins, *Essentials of Organizational Behavior*, 186.

departmentalizing tasks by function include the following: "specialists grouped together often develop narrow tunnel vision and may lose track of the overall goals of the organization. Furthermore, their strong allegiance to a profession, specialized vocabulary, and physical proximity may cause them to avoid interaction and communication with other groups."[13] Organizing by function can cause a misplaced emphasis on functional imperatives at the expense of larger organizational goals. Examples of functional organizations, as shown in Figure 4, include MNF-I's Gulf Region Division and Task Force Troy, which conducted engineering support and counter-IED operations respectively throughout each of the operating areas of MNC-I's major subordinate commands.[14]

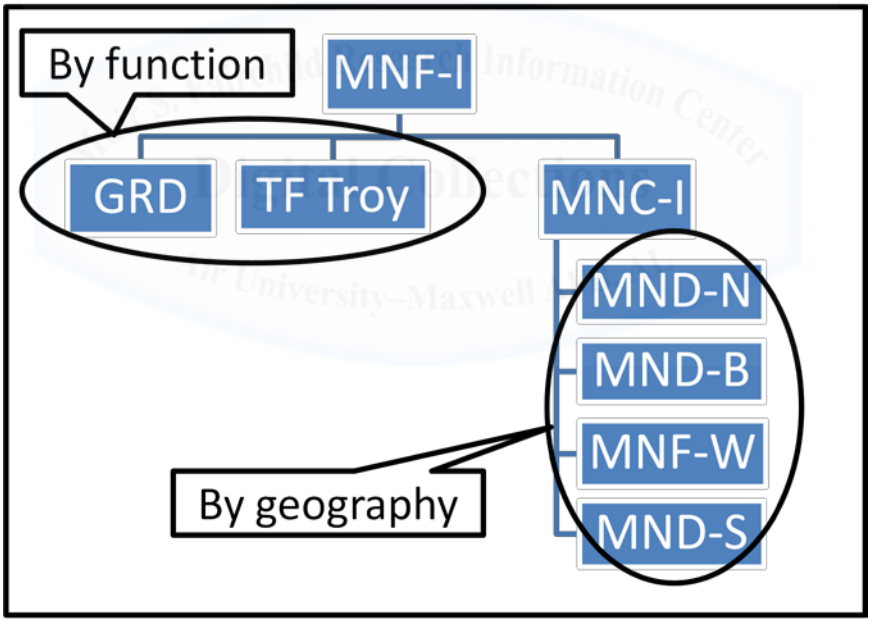

Figure 4. MNF-I's Gulf Region Division and Task Force Troy Departmentalized by Function
Source: Author's original work

[13] Scanlan and Keys, *Management and Organizational Behavior*, 84.
[14] US Army Corps of Engineers, Gulf Region Division, "Gulf Region Division Update," 13 February 2009, Slide 6; SSgt R. Michael Longoria, "Joint Task Force Airmen Save Lives in Iraq," 28 December 2010, http://www.af.mil/news/story.asp?id=123236363 (accessed 7 April 2012).

Departmentalizing by *product* groups activities based on what they produce as a whole. In business, a department producing computers may have its own design, manufacturing, and marketing groups. The same company could also have a department producing printers with its own design, manufacturing, and marketing specialists. An advantage is additional emphasis on product performance, since a single manager directs all related activities.[15] Organizing by product subdues functional loyalties by focusing all efforts toward a product. It also provides better development of top managers who supervise and integrate several specialties within a product line. Disadvantages include duplication, limited functional expertise, and increased conflict as competing product managers vie for limited resources.[16] Multi-National Force-Iraq (MNF-I) organized some of its dissimilar missions by product. MNF-I leaders assigned tactical security operations to MNC-I and organizing, training, equipping, and advising the Iraqi Security Forces to Multi-National Security Transition Command-Iraq (MNSTC-I).[17] MNF-I's departmentalization by product is shown in Figure 5.

[15] Robbins, *Essentials of Organizational Behavior*, 187.
[16] Scanlan and Keys, *Management and Organizational Behavior*, 87.
[17] Dr. Donald P. Wright and COL Timothy R. Reese, *On Point II: Transition to the New Campaign: The United States Army in Operation Iraqi Freedom, May 2003-January 2005* (Ft Leavenworth, KS: Combat Studies Institute Press, 2008), page 42, 176.

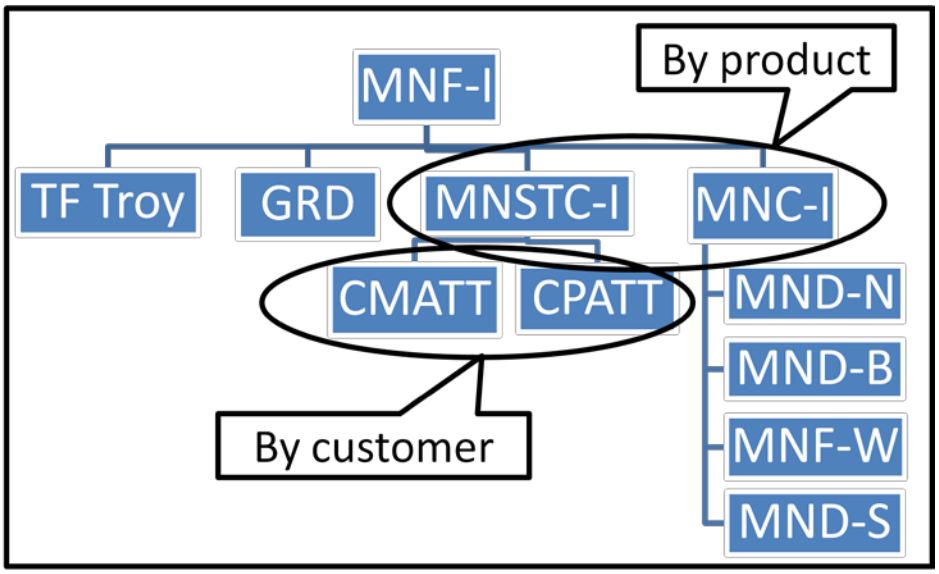

Figure 5. MNF-I Organization by Product and Customer at Different Levels
Source: Author's original work

Departmentalizing by *customer* assembles all activities necessary to service a specific customer or set of customers. A business example would be forming individual departments for wholesale or retail clientele.[18] The advantage is emphasis of the particular challenges and opportunities of each client group, especially if they differ significantly. The disadvantages mirror those of organizing by product. MNSTC-I departmentalized with this method, as shown in Figure 6, to match two discrete customers. Coalition Military Advisor Training Team supported the Iraqi Ministry of Defense while the Coalition Police Advisor Training Team supported the Ministry of Interior.[19]

A large organization may be departmentalized by different methods at different hierarchical levels. The US Air Force departmentalizes using a combination of methods. Its major commands include function-oriented Air Mobility Command, geographically-oriented US Air Forces in

[18] Robbins, *Essentials of Organizational Behavior*, 188.
[19] MAJ Timothy C. Davis, "Building the Iraqi Army: Teaching a Nation to Fish," (research paper, Quantico, VA: Marine Corps Command and Staff College, 2005), 25.

Europe, and product-oriented AF Global Strike Command. The Air Force differentiates its major commands so they can specialize in their particular missions. To continue the Operation Iraqi Freedom example, Figure 6 shows how MNF-I organized by geography, product, function, and customer.

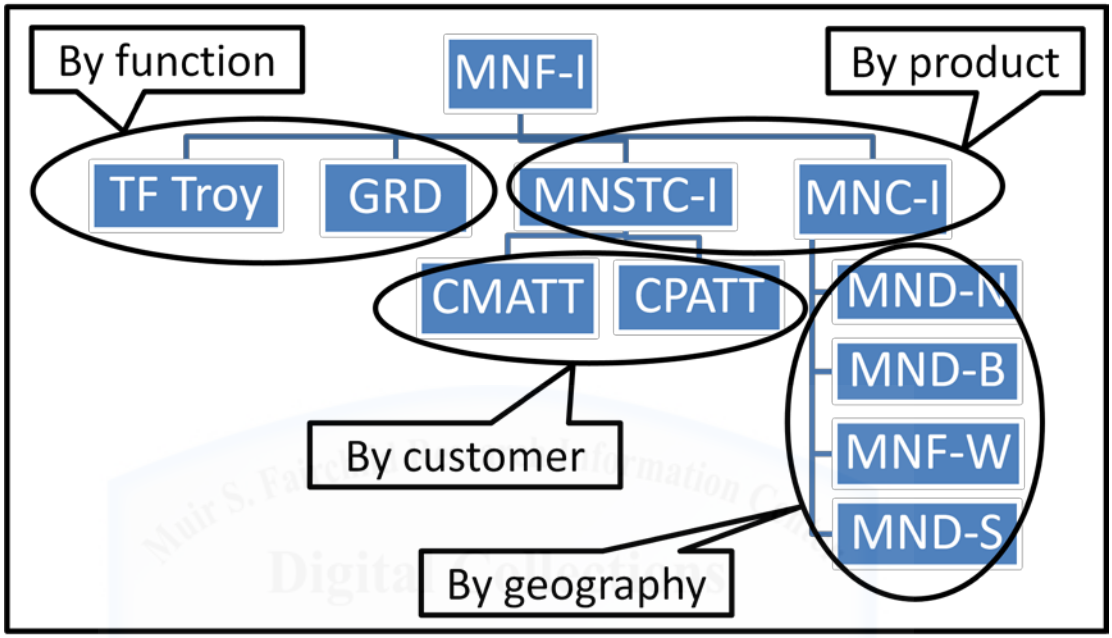

Figure 6. MNF-I's Multiple Methods of Departmentalization at Varying Levels
Source: Author's original work

Applying Specialization and Departmentalization

This paper examines how military forces respond to the adoption of dissimilar missions. Do they departmentalize the new mission with existing activities? If so, what departmentalizing method is used? Do they horizontally differentiate a specialized organization for the new mission? And if so, at what level in the hierarchy does differentiation take place?

Because military institutions most closely resemble the organizational design of bureaucracies, answering these questions requires evaluating the strengths and weaknesses of bureaucracies. Their biggest strength is their "ability to perform standardized activities

in a highly efficient manner."[20] They have established rules, which lessen the need for management decisions. Formalized standard operating procedures also enable centralized decisions. The result is minimal need "for innovative and experience decision makers below the level of senior executives."[21]

They also have disadvantages. Functional departments can create conflict in lower-level units as "functional unit goals can override the overall goals of the organization."[22] Bureaucracies also foster instinctive rule following and are "efficient only as long as employees confront problems that they have previously encountered and for which programmed decision rules have already been established."[23]

If military organizations typify bureaucracies, one can anticipate that they would struggle to adopt a new, dissimilar mission. New missions have no established procedures or rules and require considerable managerial discretion. Like bureaucracies, many military leaders seem to revert to their traditional, known, established roles or functions rather than incorporating something new. Considering these attributes, it is also predictable that a dissimilar mission that is functionally organized and differentiated at a low level in the organization would particularly struggle. The new mission would probably be the loser in conflicts at lower levels. Because experienced decision makers typically reside only at the highest levels, for a dissimilar mission to succeed, it must have the attention and sponsorship of leaders at high levels. Horizontal differentiation at a high level in the organization should help a dissimilar mission to succeed.

With an understanding of organizational structure concepts discussed in this chapter, the next two chapters will consider their application. The case studies in the next two chapters will show how

---

[20] Robbins, *Essentials of Organizational Behavior*, 193.
[21] Robbins, *Essentials of Organizational Behavior*, 193.
[22] Robbins, *Essentials of Organizational Behavior*, 193.
[23] Robbins, *Essentials of Organizational Behavior*, 193.

actual organizations have answered these questions when having to incorporate dissimilar missions.

Muir S. Fairchild Research Information Center
Digital Collections
Air University–Maxwell AFB, AL

Chapter 2

Counterinsurgency in the US Army--Vietnam

Counterinsurgency, although sometimes called by other names, was far from new when the US began its involvement in Vietnam. Nor was it a subject hidden in the closet of history. In 1906, Col C. E. Callwell, a British officer with experience in the Afghan War and the first Boer War published the third edition of *Small Wars: Their Principles and Practice*.[1] The nearly 500-page volume examined insurgent conflicts around the globe. T. E. Lawrence's writings on insurgency date from 1917.[2] The US Marine Corps published its *Small Wars Manual* in 1940. Even as the US waded further into Vietnam, David Galula's now-classic *Counterinsurgency Warfare: Theory and Practice* was published in 1964. Galula wrote of the fundamentals of counterinsurgency with personal experience from irregular war in China, Greece, Indochina, and Algeria.[3] Confirming the timelessness of each of these publications is the fact that US Army Field Manual 3-24, *Counterinsurgency* released in 2006 lists each in its annotated bibliography.[4] In the decades preceding the Vietnam War, there was no shortage of insurgency conflicts or published works on theory and practice of fighting them. Knowing this, how could the US Army have entered Vietnam so unprepared for counterinsurgency and adjusted so poorly to it?

At least part of the answer may lie in the organizational structure the Army adopted prior to and during the war. The Army was largely

---

[1] C. E. Callwell, *Small Wars: Their Principles and Practice*, 3d ed. (1890; repr., Lincoln, NE: University of Nebraska Press, 1996), xvi.
[2] See T.E. Lawrence, *Seven Pillars of Wisdom* (London: George Doran, 1917).
[3] David Galula, *Counterinsurgency Warfare: Theory and Practice* (1964; repr., Westport, CT: Praeger, 2006), vii.
[4] Army Field Manual (FM) 3-24, *Counterinsurgency*, December 2006, Annotated Bibliography 1-2.

prepped for mid-to-high-intensity conflict.[5] Irregular warfare and counterinsurgency fell below the threshold of interest for Army leaders, but President Kennedy gave them a new, dissimilar mission. In implementing Kennedy's order, the Army made force structure decisions that limited its capability to conduct counterinsurgency warfare. These decisions relegated counterinsurgency capabilities to Army Special Forces, placing the horizontal differentiation for this mission at a low level in the Army hierarchy. The conventional Army formations continually pushed counterinsurgency aside for their preferred mission of force-on-force combat. Consequently, the Army was not only unprepared for Vietnam, but it was also unable to adjust to the realities of the conflict.

Push from the Top

Upon entering the White House, President Kennedy actively pushed the Army to develop counterinsurgency capabilities. In contrast to President Eisenhower's defense strategy of massive retaliation, Kennedy's concept of flexible response called for capabilities across the spectrum of conflict.[6] In his second national security action memorandum, NSAM 2, he directed increased activity in developing capabilities for counter-guerrilla war.[7] He discussed low-intensity conflicts directly with top military leaders.[8] In addressing Congress on the defense budget he called for "a strengthened capacity to meet limited and guerilla warfare. . . . We need a greater ability to deal with guerrilla

---

[5] Andrew F. Krepinevich, Jr., *The Army and Vietnam (Baltimore, MD: John Hopkins University Press, 1986)*, 5.
[6] Lawrence Freedman, *The Evolution of Nuclear Strategy*,3rd ed. (New York: Palmgrave Macmillan, 2003), 73, 216-218.
[7] National Security Action Memorandum No. 2, "Development of Counter-guerrilla Forces," 3 February, 1961, http://www.jfklibrary.org/Asset-Viewer/B3leMaWRSkOnvMDbjd00Cw.aspx.
[8] Krepinevich, *The Army and Vietnam*, 30-31.

forces, insurrection, and subversion."[9] In NSAM 52, he instructed the Defense Department to examine "the size and composition of forces which would be desirable in the case of a possible commitment of US forces to Vietnam."[10] Disappointed with their progress on these initiatives, he called the senior Army commanders to the Oval Office to goad them into action in fielding counterinsurgency capabilities.

The president took other actions to ensure the Army was following his direction. He set up the Special Group, Counterinsurgency, charged with overseeing interagency efforts in the area and staffed it with his Special Military Representative, the Attorney General, the Chairman of the Joint Chiefs of Staff, undersecretaries of the state and defense departments, and other administration officials.[11] Kennedy directed Secretary of Defense McNamara to add counterinsurgency training to all levels of professional military education. In his 1962 West Point commencement address, Kennedy stressed the uniqueness of counterinsurgency with strong words for the cadets, many of whom would soon be in Vietnam. He claimed, "This is another type of war. . . . It requires in those situations where we must counter it, and these are the kinds of challenges that will be before us in the next decade if freedom is to be saved, a whole new kind of strategy, a wholly different kind of force, and therefore a new and wholly different kind of military training."[12] In September 1962, to deliver the new strategy and a trained force, McNamara designated "the Army as executive agent for counterinsurgency."[13] There was no doubt that the president had given the Army a new, dissimilar mission. Kennedy's resolve for

---

[9] President John F. Kennedy, "Special Message to the Congress on the Defense Budget," March 28, 1961, http://www.presidency.ucsb.edu/ws/index.php?pid=8554&st=&st1=#axzz1my6MI5rs.
[10] National Security Action Memorandum No. 52, 11 May 1961, 1.
[11] Krepinevich, *The Army and Vietnam*, 32.
[12] President John F. Kennedy, "Remarks at West Point to the Graduating Class of the US Military Academy," 6 June 1962, http://www.jfklink.com/speeches/jfk/publicpapers/1962/jfk226_62.html.
[13] Krepinevich, *The Army and Vietnam*, 105.

counterinsurgency contrasted with the Army's response to incorporating its new mission

Service Response

The Army's response to its new, dissimilar mission is best described by Army Chief of Staff Gen George H. Decker's comment to President Kennedy, "Any good soldier can handle guerrillas."[14] Despite prodding from the president, the Army made few changes to its doctrine or force structure to accommodate counterinsurgency operations. Army actions included studies, boards, briefings, and staff expansions; but these were inconsequential steps taken mostly to show compliance with presidential directives. No substantial effort was made to "indoctrinate and train its soldiers to fight insurgents."[15] The organizational changes the Army did make to differentiate counterinsurgency capabilities took place at a very low level.

The Army increased the number of Special Forces units and made them its only dedicated counterinsurgency force. President Kennedy's initial call for increasing the number of Special Forces resulted in General Decker's proposal to double the number of Special Forces Groups (SFG) to four over two years. For fiscal year 1962, the president asked Congress to increase the Army by 5,000 soldiers, with 3,000 of those allocated for Decker's counterinsurgency buildup. With Congressional approval of a 3,000-man increase, the Army's planned growth of Special Forces would bring the force to 5,048.[16] This was less than two infantry brigades. Furthermore, SFGs resided organizationally under the Special Warfare Center, which was commanded by a brigadier general.[17] For counterinsurgency operations, a SFG would work with a

[14] Quoted in Lloyd Norman and John B. Spore, "Big Push in Guerrilla Warfare," *Army* 12, (March 1962), 34.
[15] Krepinevich, *The Army and Vietnam*, 45-46.
[16] Krepinevich, *The Army and Vietnam*, 103, 105.
[17] SFC Jeremy D. Crisp, "Green Berets Honor President Kennedy in Ceremony," 18 November 2011, US Army,

psychological warfare battalion, as well as civil affairs, engineer, signal, military intelligence, and medical units to form Army Special Action Forces (SAF). Regional commands were instructed to form SAFs and designate an infantry brigade to support each if needed. This was the Army's construct for counterinsurgency from 1962 until the US committed ground troops to Vietnam in 1965. By 1965, the force only grew to seven SFGs supported by five brigades minimally trained in counterinsurgency operations.[18] Andrew Krepinevich noted that the Army's response to President Kennedy's direction resulted in the Special Forces becoming "the Army's only force dedicated to the newly acquired counterinsurgency mission."[19] Further, this single dedicated force was organizationally low in the Army's hierarchy.

The Army's approach to organizing its forces for counterinsurgency was to organize by function. It gave Special Forces the additional function of providing counterinsurgency capabilities. Organizing by function pools specialists together, which can lead to an elite force. However, it also strengthens allegiance to the functional perspective, partitions organizations across functional lines, impeding communication and integration, and fosters competition with other functions overriding larger organizational goals. In the case of the Army, its traditional functions crowded out counterinsurgency.

The Army's other efforts to satisfy the president demonstrated its overwhelming institutional preoccupation with high-intensity conflict. NSAM 131 called for several executive agencies and departments to provide counterinsurgency training for its members.[20] Krepinevich's review of Army professional military education and technical training

---

http://www.army.mil/article/69566/Green_Berets_honor_President_Kennedy_in_ceremony/ (accessed 21 February 2012).

[18] Krepinevich, *The Army and Vietnam*, 104, 110-111.

[19] Krepinevich, *The Army and Vietnam*, 112.

[20] National Security Action Memorandum No. 131, "Training Objectives for Counterinsurgency," 13 March 1962, http://www.jfklibrary.org/Asset-Viewer/BivdC1v8-0GxxLDyWr7pxw.aspx.

curricula shows how little this call influenced the Army education system. Some courses had no hours dedicated to the topic of counterinsurgency, and few addressed the topic with more than a single-digit percentage of their curriculum. Many of the designated hours were "standard training re-designated to demonstrate the Army's prompt response to the president's interest."[21] Many of the hours were also focused on offensive search-and-destroy operations instead of population security.[22]

The Army neglect of low-intensity conflict and counterinsurgency was also noticeable in whom it picked for specialized training. The Special Warfare Center established a four-week Military Assistance Training Advisors (MATA) course to train advisers for deployment to Vietnam. The early groups of MATA students were not the "fast burners," highly competitive for advancement and command assignments. Many were in their last assignment before retirement and were therefore susceptible to coercion by the assignment system. Others came from less-prestigious postings indicative of lagging performance. The quality of personnel trained was low, but so was the quantity. By the end of 1963, of 16,000 troops serving in Vietnam, less than 3,000 had been trained in the MATA course.[23]

Adjustments to Army headquarters staffs were not substantive and little more than lip service to show the administration the Army was taking action. The Army established the Special Warfare Directorate and placed Brig Gen William B. Rosson as its head. Army Chief of Staff General Decker let Rosson know he opposed the creation of the position and viewed it "as an intrusion visited upon the Army by the Kennedy administration."[24] Decker created an organizational barrier for Rosson

---

[21] Krepinevich, *The Army and Vietnam*, 46.
[22] Krepinevich, *The Army and Vietnam*, 49.
[23] Krepinevich, *The Army and Vietnam*, 48-49.
[24] Gen William B. Rosson, "Four Periods of American Involvement in Vietnam: Development and Implementation of Policy, Strategy and Programs, Described and

and his work by not allowing him his own staff, instead requiring him to work through the Deputy Chief of Staff for Operations.[25] Although Rosson's position was intended to emphasize counterinsurgency at a high level, with the Army's major institutional focus on mid- to high-intensity conflict, Decker's bureaucratic barrier ensured Rosson's efforts would remain a low priority.

Another organizational change of this era is often erroneously associated with counterinsurgency. The Army's creation of airmobile units was a major force-structure change made in the 1960s. The timing of their establishment, their improved mobility, and their use in Vietnam suggest these forces were designed for counterinsurgency operations. This is not, however, the case. The Army's primary concern was nuclear warfare in Europe. Accordingly, Army aviation was to provide mobility to small, dispersed units over the wide area of the nuclear battlefield. Greater mobility on the lower end of the spectrum of warfare was a secondary benefit.[26] The fact that helicopters provided increased mobility useful against partisans in undeveloped areas helped the bureaucratic maneuvering to garner support for the airmobile concept. However, Krepinevich concluded, however, that it "was accomplished with conventional and nuclear wars, not counterinsurgency, in mind."[27]

The Army's response to its new, dissimilar mission was not total indifference, but it was also not the radical transformation called for by the president. Several actions demonstrate the preponderance of Army leadership's interest lay in high-intensity conflict. Initiatives toward preparing the Army for counterinsurgency were viewed as an inconvenience and garnered the minimum resources and attention possible to visibly demonstrate compliance to the administration. These

---

Analyzed on the Basis of Service Experience at Progressively Senior Levels," (Ph.D. diss., University of Oxford, 1979), 101, in Krepinevich, *The Army and Vietnam*, 43.

[25] Krepinevich, *The Army and Vietnam*, 43.

[26] LTG John J. Tolson, *Vietnam Studies: Airmobility 1961-1971* (Washington, DC: Department of the Army, 1989), 12.

[27] Krepinevich, *The Army and Vietnam*, 114.

initiatives were overshadowed by the Army's institutional inertia. As a result, specialization for counterinsurgency was placed at a low level of the Army's hierarchy, within the Special Forces alone. Even the voices placed high in the organization were drowned out by the structure of the staff. Counterinsurgency forces were left with few resources, inadequate high-level representation, and little real encouragement that their mission was important to senior Army officers. This outcome was not wholly inevitable because several warning signs were placed along the Army's path.

Opportunities Lost Leading into Vietnam

In the early 1960s, the Army's emphasis on nuclear warfare and lack of interest in counterinsurgency had left it unprepared in doctrine and equipment for the conflict it encountered.[28] However, the Army was offered several opportunities to recover before it entered a large-scale insurgency in Vietnam. Counterinsurgency experience, publications, and doctrine were available; and on two occasions these had been consolidated into comprehensive reviews with specific recommendations that could have triggered an improved Army response.

In October 1961 Brig Gen Richard G. Stilwell submitted a report titled "Army Activities in Underdeveloped Areas Short of Declared War," to the secretary of the army and chief of staff. In his strong criticism of Army efforts to date toward preparing for counterinsurgencies, Stilwell cited a "failure to evolve simple and dynamic doctrine.[29] Larry E. Cable's review of US Army doctrine in the early 1960s revealed threads of traditional counterinsurgency concepts existed in field manuals at the time, but doctrine "emphasized the importance of sealing borders and engaging hostile bases with large formations of highly mobile troops

[28] MAJ Robert A. Doughty, *The Evolution of US Army Tactical Doctrine, 1946-76* (Fort Leavenworth, KS: Combat Studies Institute, August 1979).
[29] BGen Richard G. Stilwell to Secretary of the Army, "Army Activities in Underdeveloped Areas Short of Declared War," memorandum 13 October 1961, vii, http://cgsc.cdmhost.com/cdm/singleitem/collection/p4013coll11/id/1659/rec/8#img_view_container.

drawn from the fire-power-heavy general purpose forces."[30] He further wrote, "Not only were unconventional operations, psychological operations and civic affairs subordinated to traditional, aggressive military tactics, doctrine on civic actions was vague and contradictory."[31]

The Stilwell Report also made several organizational structure recommendations. It called for the Special Warfare Division of the Army General Staff, which had been downgraded below a directorate in 1948, to be again elevated to directorate status. During the period it had been downgraded "other concerned Directors in DCSOPS [were to] assume the special warfare functions falling within their province. Such has never really been the case."[32] Stilwell recognized that as long as the Army was more concerned with high-intensity conventional conflict, individual staff sections would relegate special warfare to a lower priority and never give it the attention it deserved.

In addition to staff organization changes, Stilwell recommended changes in outlook about how to resource counterinsurgency operations. The report made clear that if the Army was to develop doctrine, training, and forces commensurate with the expectations of the president and the growing threat of insurgencies around the world, changes were necessary.[33] Specifically, it suggested Special Forces no longer be considered the primary source for fulfilling counterinsurgency requirements. Instead, Special Forces should be considered ancillary with the entire Army "considered the main reservoir."[34] Except for minor matters of little substance, the recommendations of the Stilwell Report were summarily dismissed. No force structure changes took place as a result of the report.[35]

---

[30] Larry E. Cable, *Conflict of Myths: The Development of American Counterinsurgency Doctrine and the Vietnam War* (New York: New York University Press, 1986), 141-155.
[31] Cable, *Conflict of Myths*, 154.
[32] Stilwell, "Army Activities in Underdeveloped Areas Short of Declared War," 27-28.
[33] Stilwell, "Army Activities in Underdeveloped Areas Short of Declared War," 3.
[34] Stilwell, "Army Activities in Underdeveloped Areas Short of Declared War," xviii.
[35] Krepinevich, *The Army and Vietnam*, 44.

After the Stilwell Report, another study made sweeping recommendations regarding special warfare. At the request of the commander of US Continental Army Command, Lt Gen Hamilton H. Howze submitted a report titled "Special Warfare Board Final Report" in January 1962.[36] The Special Warfare Board claimed Army doctrine, concepts, and equipment were insufficient for counterinsurgency.[37] In a statement highlighting the fact that this was a dissimilar mission for the Army, the report posited that counterinsurgency was "foreign to fundamental Army teaching and practice," requiring a reorientation.[38] Howze called for "a very considerable reorientation of [the Army's] outlook and effort."[39]

To enact change on the scale necessary to prepare adequately for the new, dissimilar mission, the Special Warfare Board recommended several force structure changes. The board seconded a recommendation from the Stilwell Report suggesting Special Forces be an adjunct to the Army's counterinsurgency capability, but the main force should be the whole Army, and "detailed planning [should] start now with respect to selecting personnel, organizing, training, equipping, and readying them for deployment."[40] Another specific recommendation called for assigning counterinsurgency missions to three divisions and three battle groups as their highest priority.[41] It further called for each of these units to organize and train advisor teams to focus on specific areas or countries. These forces would be tracked at the Department of the Army level,

[36] LTG Hamilton H. Howze, president, Special Warfare Board, to commanding general, US Continental Army Command, memorandum, "A Study to Inquire Into All Aspects of Special Warfare Operations," 28 January 1962, 1.
[37] Howze, "A Study to Inquire Into All Aspects of Special Warfare Operations," 12.
[38] Howze, "A Study to Inquire Into All Aspects of Special Warfare Operations," 5.
[39] Howze, "A Study to Inquire Into All Aspects of Special Warfare Operations," cover memo.
[40] Howze, "A Study to Inquire Into All Aspects of Special Warfare Operations," 102, 106-107.
[41] Howze, "A Study to Inquire Into All Aspects of Special Warfare Operations," 19, 33.

offered incentive pay for language proficiency, and subjected to new rules for assignments, rotations, and tour lengths.[42]

The Special Warfare Board not only recognized the new mission as being dissimilar, but also recommended organizational changes to effectively meet its challenges. By giving a division a primary mission of counterinsurgency, the Army would have created differentiation at a high level. Instead of relegating counterinsurgency to Special Forces, counterinsurgency forces would be represented by two-star division commanders. Further, with counterinsurgency as their primary mission, these commanders would not have faced an internal conflict with traditional missions, which would otherwise always have priority over counterinsurgency. Centralizing control of adviser units at the departmental level would have created another bureaucratic instrument with which service leasers could protect the interests of these specialized forces. Krepinevich surmised, "Had the recommendations of the Special Warfare Board been adopted in their entirety, the forces deployed to Vietnam in 1965 would have been significantly better organized to deal with the insurgents than those actually sent over."[43] Unfortunately, while "many minor recommendations were adopted, the major revisions recommended in the force structure . . . were either watered down or disapproved."[44] As a result, the Army missed opportunities to greatly improve its counterinsurgency capabilities before the large-scale commitment of ground troops to Vietnam.

Actions in Vietnam

Throughout the years of commitment in Vietnam, Army forces predictably focused on mid-to-high-intensity conflict. Although counterinsurgency efforts showed promising results, they were constantly undermined by the Army's predisposition for conventional

[42] Howze, "A Study to Inquire Into All Aspects of Special Warfare Operations," 31
[43] Krepinevich, *The Army and Vietnam*, 110.
[44] Krepinevich, *The Army and Vietnam*, 110.

operations. This tendency surfaced with the earliest US involvement in Vietnam.

Early efforts to assist and advise the Republic of Vietnam Armed Forces focused on building conventional forces suited for mid-intensity conflict. The Military Assistance Advisory Group (MAAG) envisioned the greatest threat to be a conventional invasion from North Vietnam, not an internal insurgency. Lt Gen Samuel Williams took over the MAAG with instructions to build up South Vietnamese forces to defend against an external attack. Despite reservations from the Vietnamese General Staff about the appropriate structure, MAAG advisory and assistance personnel worked to replicate US organization, training, and equipment, which was designed for conventional operations. US advice led to the disbandment of all light infantry divisions, well-suited for operations against insurgencies. [45] According to Krepinevich, Lt Gen Lionel C. McGarr, who took over as MAAG chief in 1960, ensured "lip service was given to counterinsurgency . . . [but] that traditional Army doctrine and force structure was applied." [46] Under McGarr's leadership, offensive action became the primary focus with search-and-destroy operations being the preferred tactic.[47] How inappropriate this approach was for counterinsurgency operations is evident in McGarr's absurd statement, "We will 'out conventional' the unconventionalists!"[48]

Even when Army leaders mentioned their support to counterinsurgency, they usually meant search-and-destroy missions, not pacification and classic counterinsurgency doctrine. A 1960 study from the Army Command and General Staff College decried the setbacks to operational readiness of South Vietnamese forces when they were used in

[45] Krepinevich, *The Army and Vietnam*, 22-24.
[46] Krepinevich, *The Army and Vietnam*, 57.
[47] Krepinevich, *The Army and Vietnam*, 57-58.
[48] LTG Lionel C. McGarr, MAAG Commander to Senior Advisers, "Anti-Guerrilla Guerrilla," 10 December, 1960, quoted in Krepinevich, *The Army and Vietnam*, 58.

pacification operations.[49] Two memoranda from the Joint Chiefs of Staff in 1961 and early 1962 revealed the same misconception. Each asked for the release of "Vietnamese forces from advanced and static defense positions to permit their future commitment to counterinsurgency actions."[50] These leaders advocated abandoning static defense positions, which provided security to the population. Instead, they wished indigenous forces to engage in active search-and-destroy missions, which they labeled as counterinsurgency but which more closely resembled conventional sweep operations.

One classic counterinsurgency program, known as Strategic Hamlets, showed promising results in countering the insurgency until the appropriately named Operation SWITCHBACK. Special Forces began operating in South Vietnam in late 1961, supporting the Civilian Irregular Defense Groups (CIDG) program under the Central Intelligence Agency (CIA). They equipped local, volunteer paramilitary groups with small arms and radios and trained them to defend their villages.[51] The Green Berets followed traditional counterinsurgency doctrine to pacify interior villages by offering medical clinics, teaching farming techniques, and establishing local population security. In five months, the program grew to 40 villages; and four months later 200 villages had voluntarily enrolled. The commitment of US forces for this effort was 60 Green Berets assisting Vietnamese Special Forces.[52]

The Strategic Hamlet program's success became its downfall. The CIA was so pleased with the program's success that it asked for 16 more Special Forces teams. With the growth of the program and its expansion beyond a small-scale operation, the Department of Defense (DOD) argued

---

[49] Neil Sheehan et al., *The Pentagon Papers: as published by the New York Times* (New York: Quadrangle Books, 1971), 9.
[50] Sheehan, *The Pentagon Papers*, 130, 159.
[51] Krepinevich, *The Army and Vietnam*, 70-71.
[52] COL Francis J. Kelly, *US Army Special Forces*, 1961-1971 (Washington DC: Center of Military History, 1973), 26, 28, 29.

for and gained control of the program from the CIA.[53] By this time, MAAG had been replaced by the Military Assistance Command, Vietnam (MACV) commanded by Lt Gen Paul D. Harkins. Harkins was an armor officer with no counterinsurgency experience.[54] The target completion date for transferring the Strategic Hamlets program to MACV, named Operation SWITCHBACK, was July 1963.[55]

As MACV took over, it made two major changes to the Strategic Hamlet program. First, it shifted Special Forces personnel out of the program to conduct offensive operations in unconventional warfare. In doing so, MACV removed the Army's best-trained and most-experienced personnel in counterinsurgency from the pacification effort. Second, MACV expanded the CIDG program faster than local security forces could be properly trained, equipped, and developed. Lacking sufficient manpower to manage the expanding program, many villages were handed over to Vietnamese Special Forces units that were not adequately trained for the mission. The overall result was "the alienation of the population and the collapse of the program itself."[56]

MACV made two organizational adjustments related to Special Forces in Vietnam. As mentioned previously, it moved the Green Berets from the CIA's control to its own. This change shifted them from pacification and counterinsurgency to offensive operations. The second change, shown in Figures 7 and 8, in May 1964, placed "operational control of Special Forces 'A' and 'B' detachments . . . to the MACV senior adviser in each corps tactical zone."[57]

---

[53] Krepinevich, *The Army and Vietnam*, 70-72.
[54] Krepinevich, *The Army and Vietnam*, 64.
[55] Kelly, *US Army Special Forces*, 1961-1971, 31.
[56] Krepinevich, *The Army and Vietnam*, 71-74.
[57] Krepinevich, *The Army and Vietnam*, 74.

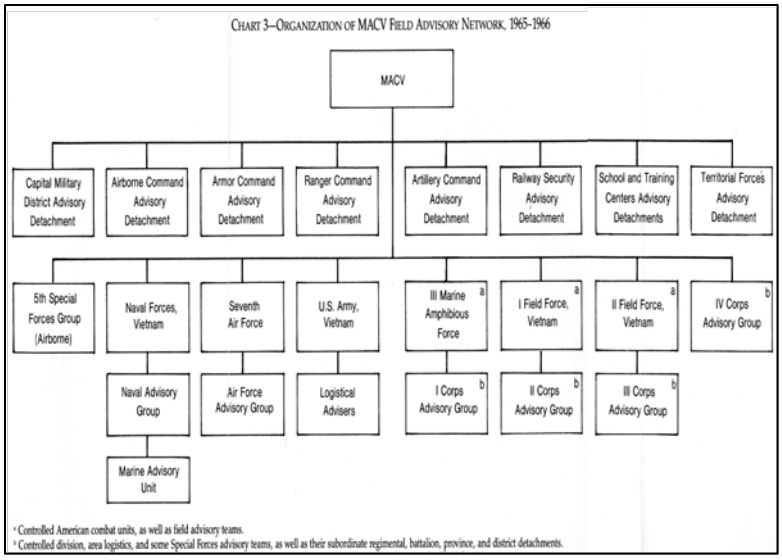

Figure 7. Organization of MACV Field Advisory Network, 1965-1966
Source: Jeffrey J. Clarke, Advice and Support: The Final Years, 1965-1973 (Washington DC: Center of Military History, 1988), 73.
5th Special Forces Group appears equivalent in the vertical hierarchy to 3-star Field Force Commanders/Corps Advisory Groups, but this chart does not reflect operational control.

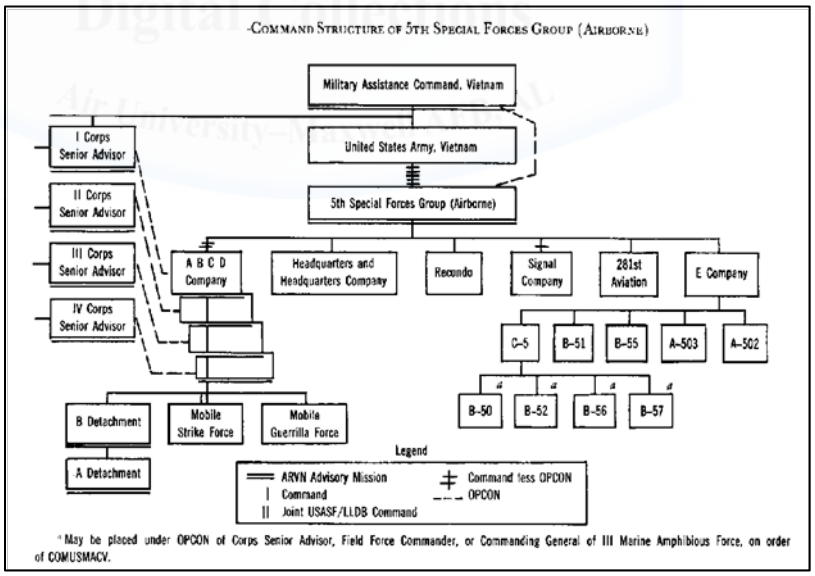

Figure 8. Command Structure of 5th Special Forces Group (Airborne)
Source: COL Francis J. Kelly, US Army Special Forces, 1961-1971 (Washington DC: Center of Military History, 1973), 123.
This chart better shows how special forces capabilities were actually relegated to a lower vertical level. Operational control of operational Special Forces detachments did not belong to the 5th Special Forces Group, but was transferred to the Corps Senior Advisors in each region.

Figure 9 shows how the corps zones were organized geographically. The MACV senior adviser was typically a three-star general who also commanded a force made up primarily of American combat units. Army generals coordinating all activities in their areas of operation focused on conventional offensive operations, not pacification. By subordinating special forces detachments, the only trained counterinsurgency force, to corps senior advisers the Army cut off their "direct operational link with MACV headquarters."[58] This construct often resulted in the misapplication of counterinsurgency doctrine with employment of local village guard forces not in their intended role, but in offensive operations.[59]

Figure 9. Corps Areas of Responsibility
Source: Jeffrey J. Clarke, Advice and Support: The Final Years, 1965-1973 (Washington DC: Center of Military History, 1988), 35.

[58] Jeffrey J. Clarke, *Advice and Support: The Final Years, 1965-1973* (Washington DC: Center of Military History, 1988), 57.
[59] Clarke, *Advice and Support* , 73.

General William C. Westmoreland took over MACV in June 1964 and watched over an ever-increasing commitment of ground troops.[60] Airmobile forces, designed for fighting in a limited nuclear war in Europe, deployed to South Vietnam. But, the Special Action Forces, which were created for counterinsurgency operations, were never deployed.[61] Under Westmoreland's leadership, the US effort continued to emphasize conventional, offensive operations using search-and-destroy tactics.[62] Operation Masher in 1966 illustrated the conventional mindset. Intensive shelling and air strikes on fifteen hamlets killed several hundred Communist fighters but also destroyed more than 1,000 houses. Hundreds of civilians were wounded, and roughly 90 were seriously injured. After the area was cleared, reporter Neil Sheehan asked the corps commander, Maj Gen Stanley Larsen, what plans he had to pacify the area. Larsen replied that he had no plans for pacification and would instead pull out his airborne troops as well as South Vietnamese forces and seek another battle.[63] This type of action does not conform to the principles of counterinsurgency doctrine. Yet Larsen soon earned his third star.[64]

Civilian and military leaders supported counterinsurgency in name but that support never materialized in resources and strategy. Robert Komer argued that up to 1967, "counterinsurgency was not tried on a sufficient scale largely because it was not part of the institutional repertoire of most [Vietnamese] and US agencies involved."[65] He attributed the gap between declared policy and applied resources to the lack of a well-resourced advocate capable of instituting

---

[60] Krepinevich, *The Army and Vietnam*, 93-94.
[61] Krepinevich, *The Army and Vietnam*, 100.
[62] Krepinevich, *The Army and Vietnam*, 154-155.
[63] Neil Sheehan, *A Bright Shining Lie: John Paul Vann and America in Vietnam* (New York: Random House, 1988), 582-584.
[64] Sheehan, *A Bright Shining Lie*, 583.
[65] Robert W. Komer, *Bureaucracy at War: US Performance in the Vietnam Conflict* (Boulder, CO: Westview Press, 1986), 149.

counterinsurgency policies. Once mobilized, the military's vast resources, logistics capabilities, and command structure created momentum allowing it to carry out its institutional bent.[66]

Although the Army overwhelmingly prioritized conventional operations, it did participate in some counterinsurgency efforts. McNamara attributed slow progress in pacification to Viet Cong terror tactics and "the requirement for the bulk of the US, Free World, and South Vietnamese military forces to direct their attention to the large unit actions."[67] In May 1967, President Johnson placed the civilian pacification program, re-named Civil Operations and Revolutionary Development Support (CORDS), under the command of MACV.[68] CORDS combined the US civilian pacification efforts with MACV's organization and resources. Johnson, emphasizing his personal commitment to CORDS, sent his special assistant of pacification, Robert Komer, to Vietnam to lead it. Johnson gave Komer the rank of ambassador and appointed him the deputy commander of MACV.[69] The command arrangement is shown in Figure 10. CORDS held similar positions down the chain of command. For example, each corps commander had a CORDS representative as a deputy. At lower levels, all advisory efforts fell under the CORDS chiefs.[70] This structure ensured representation of CORDS at all levels of the MACV hierarchy.

---

[66] Komer, *Bureaucracy at War*, 147, 149.
[67] Secretary of Defense Robert S. McNamara, Interview by the Press at the Capitol, 2 February 1967, *Selected Statements on Vietnam: January – June 1967*, Muir S. Fairchild Library, Maxwell AFB, AL.
[68] National Security Action Memorandum 362, "Responsibility for US Role in Pacification (Rural Development)," 9 May 1967, http://www.lbjlib.utexas.edu/johnson/archives.hom/nsams/nsam362.asp.
[69] Sheehan, *A Bright Shining Lie*, 656-657.
[70] Krepinevich, *The Army and Vietnam*, 216-217, 227.

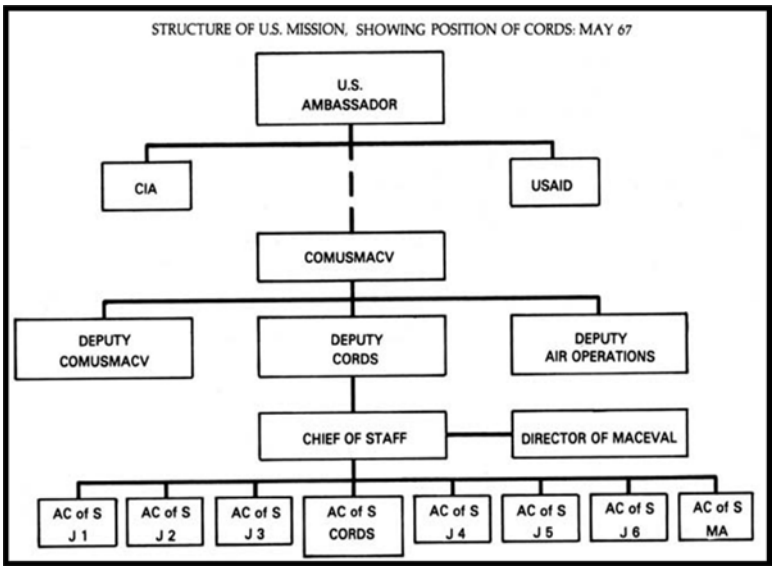

Figure 10. Structure of US Mission, Showing Position of CORDS, May 1967
Source: Thomas W. Scoville, Reorganization for Pacification Support (Washington, DC: Center of Military History, 1982), 57.

In an effort to provide population security, CORDS renewed emphasis on the paramilitary forces of the Regional Forces (RF) and Popular Forces (PF). While RFs "served only in their own province," PFs worked part-time "in their own village area."[71] These forces declined after Operation SWITCHBACK, but MACV increased their numbers slightly in 1967. With the advocacy of CORDS, MACV increased the RF and PF forces by over 75 percent from 1967 to 1971 while providing better equipment and training. These territorial forces showed promise in increasing population security in a more affordable, sustainable, and effective manner than offensive, conventional operations by US forces.[72]

CORDS showed promising results but only on a small scale. CORDS, composed of 6,000 military and 1,100 civilian personnel, was a miniscule portion of the total US effort in Vietnam.[73] One of Johnson's reasons for placing CORDS under MACV was to solve the problem of a

[71] Krepinevich, *The Army and Vietnam*, 218-219.
[72] Krepinevich, *The Army and Vietnam*, 218-221.
[73] Krepinevich, *The Army and Vietnam*, 218.

single chain of command.[74] Unfortunately, this solution had a secondary effect of subordinating pacification to the primary focus of that singular chain of command. Even though CORDS was represented at every level in MACV, its personnel were always placed in a secondary role—in position and perceived importance. Ambassador Komer was a deputy to Westmoreland and subject to his conventional viewpoint. The deputy relationship repeated itself all the way down the chain, as did the point of view with "the bulk of the Army remain[ing] only peripherally concerned with pacification."[75]

The Army's control of CORDS mirrored Westmoreland's pressure on one of his corps commanders, Marine Maj Gen Lewis W. Walt. Walt's III Marine Amphibious Force had invested heavily in pacification operations by Combined Action Platoons. These units integrated Marines and Vietnamese soldiers, engaging in on population security instead of search and destroy missions. Despite progress in Walt's area of operations, Westmoreland implored Walt to focus instead on search and destroy missions and even threatened official orders if Walt failed to comply.[76]

Army leaders subordinated pacification efforts by special forces, civilian agencies, and the Marines to their conventional emphasis. Capturing the essence of the dominant Army perspective, an Army lieutenant general claimed in an interview to have two rules for pacification: "One is that you would try to get a very close meshing of pacification . . . and military operations. The other rule is the military operations would be given first priority in every case."[77] Though well

---

[74] President Lyndon B. Johnson, "Vietnam Pacification Program," Press Conference, 18 May 1967, *Selected Statements on Vietnam: January – June 1967*, Muir S. Fairchild Library, Maxwell AFB, AL.
[75] Krepinevich, *The Army and Vietnam*, 222.
[76] Sheehan, *A Bright Shining Lie*, 634-637.
[77] Lt Gen Julian J. Ewell quoted in Krepinevich, *The Army and Vietnam*, 222.

intentioned, with few resources and a second-rate priority, it is no wonder that CORDS had limited effect.[78]

Analysis

Decisions on organizational structure limited the Army's capability to succeed in its dissimilar mission of counterinsurgency. The Army's differentiation of counterinsurgency at a low level in its hierarchy resulted in the voices for counterinsurgency being drowned out by traditional Army views. As a result, the Army entered the Vietnam War unprepared for the challenges it faced.[79] The organizational choices made in the years leading up to the war adversely affected the employment and strategy of US forces. The Army, which did not organize or train for counterinsurgency operations before the war, fielded "an inefficient and ineffective force for defeating insurgent guerrilla forces in a low-intensity conflict."[80]

The Army's focus on conventional operations left little room for the development of counterinsurgency capabilities. Based on the status of the Cold War and the Army experience of the Korean War and World War II, it is unsurprising that the Army's focus was mid-to-high-intensity conventional conflict. However, the Kennedy administration noticed changes in the international landscape and gave the Army a new, dissimilar mission to counter guerrilla warfare. The Army's response to its new mission reflected General Decker's dictum that "any good solider can handle guerrillas."

The organizational changes the Army did make to differentiate counterinsurgency capabilities took place at a very low level in the organizational hierarchy. The Special Forces became "the Army's only force dedicated to the newly acquired counterinsurgency mission."[81] Even the expanded SFGs still fell under the Special Warfare Center,

[78] Krepinevich, *The Army and Vietnam*, 222.
[79] Krepinevich, *The Army and Vietnam*, 55.
[80] Krepinevich, *The Army and Vietnam*, 4.
[81] Krepinevich, *The Army and Vietnam*, 112.

commanded by a mere brigadier general. On the Army headquarters staff, the chief of staff positioned his Special Warfare Directorate under the Deputy Chief of Staff for Operations. The Army organized its counterinsurgency capability by function in Special Forces. This functional approach led to the overriding of classic counterinsurgency perspectives by the traditional functions of the Army. The warnings from the Stillwell Report and the Howze Board went unheeded. McNamara later recalled the disastrous results, "We failed to adapt our military tactics to the task of winning the hearts and minds of people."[82]

The strategy and employment of US forces in Vietnam further reflect the Army's institutional bias toward conventional operations. The success of the Strategic Hamlet program supported by Green Berets was due in part to its control by the CIA. When MACV took control of the forces and the program, the emphasis shifted from traditional counterinsurgency doctrine to offensive, conventional operations. Operational control of Special Forces detachments, the only dedicated force trained in counterinsurgency, rested with the corps senior advisers. Similarly, CORDS provided representation of the pacification program at all levels of MACV command, but always in a subordinate role. This represented the administration's attempt to emphasize counterinsurgency throughout the chain of command. However, Army leaders failed to provide the dissimilar mission with sufficient organizational differentiation to overcome conventional thinking. Structural subordination meant the predominant view of Army leadership would prevail. The Army's force structure decisions differentiated counterinsurgency forces at too low a level to overcome its institutional inertia. Counterinsurgency author John Nagl described the Vietnam experience as, "The US Army, predisposed to fight a conventional enemy that fought using conventional tactics, overpowered

[82] Robert S. McNamara and Brian Van De Mark, *In Retrospect: The Tragedy and Lessons of Vietnam* (New York: Times Books, 1995), 48.

innovative ideas from within the Army and from outside it."[83] An organizational structure, which lacked a high-level differentiation of the dissimilar mission, enabled this overpowering by institutional inertia.

Muir S. Fairchild Research Information Center
Digital Collections
Air University–Maxwell AFB, AL

[83] John A. Nagl, *Learning to Eat Soup with a Knife: Counterinsurgency Lessons from Malaya and Vietnam* (Chicago: University of Chicago Press, 2005), x.

Chapter 3

US Air Force ICBM

As the Cold War took shape in the years immediately following World War II, the United States and the Soviet Union took increasing interest in the potential of nuclear-armed ICBMs.[1] The concept of rockets as weapons was not original in the post-war years, but advances in rocketry and nuclear-weapon technology made these powerful weapons technically feasible. At this point, the race was on.[2] The United States looked to its newly formed Air Force to develop a delivery vehicle with the necessary range and payload. The result was the relatively quick development and fielding of operational ICBMs, which became an icon of the Cold War.

The story of Air Force's developing and fielding ICBMs is not just about technical achievements. It also about how an organizational structure can enhance the potential for success. Ballistic missiles represented a dissimilar mission compared to manned bombers, which had come to dominate the Air Force in the early days of Strategic Air Command. This new mission met some resistance among AF officers, but key leaders made organizational decisions that set it on a path to success. The Air Force chose to differentiate an organization responsible for the ICBM program at a high level. This differentiation was key to overcoming institutional inertia for this new, dissimilar mission.

Push from the Top

ICBMs gained increasing priority in the post-war years among the nation's top national security leaders, including the president. Gen

---

[1] The Soviets were interested in ICBMs before they had an atomic bomb. See McDougall, 53.

[2] Walter A. McDougall, *The Heavens and the Earth: A Political History of the Space Age* (1985; repr., Baltimore, MD: Johns Hopkins University Press, 1997), 96.

Bernard Schriever claimed "military space activity began in late 1945, immediately after World War II."[3] Looking to the future, Commander of the Army Air Forces Gen Henry H. "Hap" Arnold charged then Col Schriever in his new job as scientific liaison officer to maintain cooperative relationships with the American community of scientists and academics, who had proved so useful in the war. Arnold also commissioned scientist Theodore von Kármán to study the potential integration of new technologies with operational requirements for the next twenty years. In response, Von Kármán created what became the AF Scientific Advisory Board and delivered "Toward New Horizons" as his technological forecast.[4] The report, released in December 1945, envisioned intercontinental missiles capable of targeting any place on earth.[5]

Within a few years after World War II, the US monopoly on nuclear weapons ended; and the national security strategy evolved. The Truman Administration made deterrence backed by nuclear weapons a key part of foreign policy, while continuing to reduce the defense budget.[6] For deterrence, the primary method of delivery was then bomber aircraft. The initial US ICBM development effort, the MX-774 project, was cancelled. Historian Walter McDougall attributed the cancellation to "the need for rigorous economy, which dictated that scarce funds be put into bigger bombers and eventually jet aircraft; the assumption of American superiority in aviation; the preference of 'blue-sky' air officers for manned bombers; and scientific pessimism about the technical problems."[7] Several events soon caused significant changes to some of these factors.

---

[3] Gen Bernard A. Schriever (Ret), "Military Space Activities: Recollections and Observations," in *The USAF in Space 1945 to the Twenty-first Century*, ed. R. Cargill and Jacob Neufeld (Washington DC: Government Printing Office, 1998), 11.
[4] Schriever, "Military Space Activities: Recollections and Observations," 11-13.
[5] Dr Michael H. Gorn, ed., *Prophecy Fulfilled: "Toward New Horizons" and Its Legacy* (Washington DC, Air Force History and Museums Program, 1994), 105-106.
[6] McDougall, *The Heavens and the Earth,* 92-95.
[7] MacDougall, *The Heavens and the Earth,* 98.

The Soviets exploded an atomic bomb in 1949, negating the US monopoly.[8] A US nuclear test labeled the "Mike" shot proved the feasibility of developing a thermonuclear weapon with a much higher yield than the atomic bomb, but the device's weight remained a limiting factor in mounting it on an operational missile. In 1953, however, laboratory tests demonstrated potential for a significant reduction in warhead weight. The "Shrimp" Shot in 1954 confirmed the laboratory concept.[9] Spurred on by the pressure of the Soviets' successful thermonuclear explosion in 1953, the Air Force took reinvigorated action toward an accelerated ICBM program.[10]

A driving force behind the Air Force's new effort was Trevor Gardner, who began work as the Special Assistant to the Secretary of the Air Force for Research and Development in February 1953.[11] David Spires labeled Gardner "the technologically evangelical [leader] . . . who made it his mission in public life to convince the government that the nation must pursue a crash program to develop an operational AF ICBM or face nuclear disaster."[12] In late 1953, Gardner convened the Strategic Missile Evaluation Committee, a collection of civilian experts chaired by Dr. John von Neumann to study the Air Force's current missile programs. The group, which became known as the Teapot Committee, submitted its report in February 1954, "confirm[ing] the feasibility of building an operational ICBM by 1960."[13] With the backing of the report from respected scientists and engineers, Gardner convinced Secretary of

---

[8] MacDougall, *The Heavens and the Earth,* 50.
[9] Ernest G. Schwiebert, *A History of the US Air Force Ballistic Missiles* (New York: Praeger, 1965), 68-69.
[10] MacDougall, *The Heavens and the Earth,* 55.
[11] Jacob Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960* (Washington DC: Office of Air Force History, 1990), 327.
[12] David N. Spires, "The Air Force and Military Space Missions: The Critical Years 1957-1961," in *The USAF in Space 1945 to the Twenty-first Century*, ed. R. Cargill and Jacob Neufeld (Washington DC: Government Printing Office, 1998), 35.
[13] Jacob Neufeld, *Bernard A. Schriever: Challenging the Unknown* (Washington DC: Office of Air Force History, 2005), 9.

the Air Force Harold E. Talbott to take up the cause.[14] Soon after receiving the Teapot Committee's report, Talbott directed AF Chief of Staff Gen Nathan F. Twining to accelerate the ICBM program immediately.[15] Twining directed the Air Research and Development Command (ARDC) to establish a military and civilian organization to hasten ICBM development. ARDC's response was to set up the Western Development Division (WDD), commanded by Brig Gen Bernard A. Schriever.[16]

The development of an ICBM, which took on the name Atlas, garnered the top priority at the highest levels of government. In June 1954, AF leaders named the Atlas program the service's top priority. The next year, Schriever briefed the National Security Council (NSC) on the program. Based on the recommendation of the NSC, President Eisenhower elevated the ICBM to the nation's highest priority in September 1955.[17] Through the mid-1950s, as belief in the feasibility of a nuclear-armed ICBM gained credibility, acceleration of the Atlas program garnered support and a high priority from the nation's highest leaders. Despite its high priority, the ICBM met some resistance from uniformed AF leaders in its early years and during its development and fielding.

Service Response

The support of ICBM development by military leaders across the Air Force was mixed. Some senior leaders embraced the program and encouraged its acceleration. At the other end of the spectrum, some officers merely tolerated the missile program as long as it did not detract from the manned-bomber mission. The available evidence suggests

---

[14] Schriever, "Military Space Activities," 10.
[15] Schwiebert, *A History of the US Air Force Ballistic Missiles,* 75.
[16] Schriever, "Military Space Activities," 10.
[17] Thomas P. Hughes, *Rescuing Prometheus* (New York: Pantheon Books, 1998), 104-105.

institutional inertia biased toward manned platforms challenged ICBM development.

Varying levels of military support for missiles continued through the close of World War II and into the Korean War. In 1950, Undersecretary of the Air Force John A. McCone thought missiles received too low a priority due to "the military's preoccupation with the Korean War."[18] Top AF general officers during the Korean War gave voice to the Air Force's preoccupation with strategic bombing by manned bombers.[19] McCone's proposal for an independent missile office similar to the Manhattan Project was not well received by the Air Staff.[20]

Air Force leaders made several changes to staff organizations as interest in missiles undulated. The Guided Missile Group on the Air Staff had been replaced in July, 1949 by the Office of the Assistant for Guided Missiles, only to be deactivated that December. The functions it performed were given to several separate Air Staff offices. Missile policy, programming, budgeting, and operational concept development fell to the Special Weapons Team of the War Plans Division, Directorate of Plans. This small staff was also responsible for coordinating chemical, biological, and radiological weapons, making missiles only one of several special weapons. In1952, the Air Staff created the Office of the Assistant Deputy Chief of Staff, Operations (Guided Missiles) to take on the missile workload.[21] The staff section was a move toward higher-level differentiation; but under the Deputy Chief of Staff, Operations, missiles still had to compete against manned systems. At this time, official AF

---

[18] Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960*, 79.

[19] Even while active fighting was ongoing, General Curtis LeMay publicly remarked that Strategic Air Command's capabilities should "not be pissed away in the Korean War." The Korean War theater bomber commander "thought it was a mistake to divert SAC resources from their mission." Conrad C. Crane, *American Airpower Strategy in Korea, 1950-1953* (Lawrence, KS: University Press of Kansas), 172.

[20] Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960*, 79.

[21] Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960*, 83.

policy considered pilotless aircraft and guided rockets "merely other weapon systems that complemented aircraft."[22] Because missiles were "just another type of weapon," AF leaders thought their normal functional organization and processes were sufficient.[23]

Support for ICBMs swelled later in the 1950s but only in small circles. By 1954 the realization that missiles were potentially special led to elevating a staff organization to Assistant Chief of Staff for Guided Missiles "despite strong resistance from several Air Staff members."[24] Maj Gen Osmond J. Ritland, who worked for Schriever, later recalled in an interview his opinion that only people directly assigned to the missile program supported it.[25]

Powerful AF officers still opposed putting too much support in missiles. Despite several statements of support, General Curtis LeMay remained only a partial supporter of the Atlas program. In 1955, as Commander-in-Chief of Strategic Air Command (SAC), he praised the ICBM with a glowing remark about its large potential. He went on to say, however, that the primary purpose of missiles was to help manned bombers penetrate enemy airspace. This statement was inconsistent with AF policy at the time.[26] In Congressional testimony in 1957, as Vice Chief of Staff of the Air Force, LeMay advocated strongly for increased funds for people, bases, and modernization specific to the manned-nuclear-bomber mission. He stated that he considered the proposed increases to the missile program "a little bit strong" and "heavy on the

---

[22] Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960*, 89.
[23] Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960*, 106.
[24] Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960*, 107.
[25] Edmund Beard, *Developing the ICBM: A Study in Bureaucratic Politics* (New York: Columbia University Press, 1976), 196; Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960*, 107.
[26] Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960*, 142.

missile side."[27] LeMay's statements represented the views of a large portion of the service. In the early 1960s, over 50 percent of the Air Force's four-star positions were held by bomber generals. At that time, "the senior World War II generation's Air Force continued to prefer methods of the proven past over the uncertain future. In its view, manned bombers remained preferable to ICBMs."[28]

However, AF leaders wanted to maintain a service monopoly on the new mission. In the post-war years through the early 1950s, these leaders made several strong statements in support of long-range missiles. But they usually advanced these arguments only when attempting to keep the other services from pursuing similar programs. As the shrinking defense budget increased the emphasis on roles and missions, the Air Force strongly argued its exclusive claim to strategic weapons.[29] Edmund Beard claimed that each time the services came to an agreement on roles and missions concerning ICBMs, "the Air Force, having gained the long-range ballistic responsibility, proceeded generally to ignore the weapon until the next challenge to its control."[30]

Nevertheless, strong support for missiles existed in some quarters. Gen Thomas D. White, AF Vice Chief of Staff from 1953 to 1957 and Chief of Staff from 1957 to 1961, was a strong Atlas supporter who was remembered for lecturing the Air Staff on several occasions that ballistic missiles "were here to stay . . . and [they] had better realize this fact and get on with it."[31] Although this showed a strong commitment by one top AF leader, the fact that such strong words were necessary at all was a

---

[27] Senate, *Inquiry into Satellite and Missile Programs: Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services*, 85th Cong., 1st and 2d sess., 1958, 910.
[28] Col Mike Worden, *Rise of the Fighter Generals: The Problem of Air Force Leadership 1945-1982* (Maxwell AFB, AL: Air University Press, 1988), 109.
[29] Beard, *Developing the ICBM*, 222.
[30] Beard, *Developing the ICBM*, 223.
[31] Quoted in Oral History Interview of Col Ray E. Soper, vice commander, Ballistic Systems Division, by Harry C. Jordan, division historian, Ballistic Systems Division, 29 November 1966, typed transcript, p.3, Call K239.0512-783, IRIS 01000339, in USAF Collection AFHRA, Maxwell AFB, AL.

sign of resistance from the Air Staff. In Congressional testimony, Secretary of the Air Force James H. Douglas claimed military members in the Air Force were "open minded" about new weapon systems and "determin[ed] to press forward with the introduction of these missile systems [ICBMs and IRBMs] as rapidly as possible without loss of the effectiveness of our striking force in being."[32]

A closer analysis of Douglas' statement provides insight to the seemingly contradictory conclusions about how much AF officers supported missile programs. Some, like White and Schriever, were strong supporters. LeMay and many of the bomber generals, who dominated the Air Force at the time, supported missile programs as long as they remained within AF control and did not impinge on the manned-nuclear mission. Only after ICBMs proved their effectiveness, reliability, and cost effectiveness would the bomber generals entertain ceding some of the mission to the new system. This explanation also reflects a 1961 recommendation by White, a strong missile supporter, to pursue bombers until ICBMs established their reliability.[33]

From the end of World War II through the early 1960s, a trend of resistance to ICBMs existed among AF officers. Col Mike Worden claimed "Air Force hostility to missiles was not as categorical as many historians have concluded, and it was not based solely on the aversion of pilots to pilotless vehicles."[34] Yet, institutional inertia did exist, and it may have set back the initiation of a serious ICBM development effort by a decade. Dr. von Braun claimed a concerted effort immediately after the end of World War II "could have produced an ICBM in 1950."[35] Even when technological advances had demonstrated great promise for ICBMs

---

[32] Senate, *Inquiry into Satellite and Missile Programs*, 840.
[33] Worden, *Rise of the Fighter Generals*, 119.
[34] Worden, *Rise of the Fighter Generals*, 122.
[35] Senate, *Inquiry into Satellite and Missile Programs: Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services*, 85th Cong., 1st and 2d sess., 1958, 584.

and the Atlas program began to take shape, institutional inertia provided points of friction for the ICBM program throughout the AF bureaucracy.

Opportunities Taken in ICBM Development

AF leaders did not imagine and implement the acceleration of the long-range missile program overnight. Instead, the issue received two significant rounds of study, including observations and recommendations on how best to organize the unit responsible for the effort. These studies, heavily influenced by civilian involvement and leadership, resulted in detailed recommendations and plans, which formed the foundation for implementing the Atlas program.

The Teapot Committee made the first significant study, which recommended a particular organization for accelerating the Atlas program. Established in 1954 by Gardner and chaired by von Neumann, the committee members were all civilians from outside civil service.[36] The report's first recommendation proposed a new organization be given responsibility for the ICBM development program.[37] Rather than recommending immediate additional funding or approving existing designs, the committee recommended the newly formed group further study the issues and provide recommendations within one year for "a redirected, expanded, and accelerated program."[38] The committee considered "the most urgent and immediate need" to be setting up a new organization to manage the entire program and called for its membership to be "an unusually competent group of scientists and engineers."[39] It further recommended the new organization "be relieved of excessive

---

[36] Strategic Missile Evaluation Committee, Recommendations of the Tea Pot Committee, 1 February 1954 in Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960*, 265.
[37] Strategic Missile Evaluation Committee, Recommendations of the Tea Pot Committee, 259.
[38] Strategic Missile Evaluation Committee, Recommendations of the Tea Pot Committee, 259.
[39] Strategic Missile Evaluation Committee, Recommendations of the Tea Pot Committee, 260-261.

detailed regulation by existing government agencies."[40] In establishing the WDD, the Air Force was conforming to these organizational structure recommendations of the Teapot Committee.

The following year, in keeping with the Teapot Committee recommendation to provide a detailed plan for accelerating the program, Gardner called on AF Deputy for Budget Hyde Gillette to chair "a working group to evaluate the administrative management and control procedures" of the ICBM development program.[41] The committee, known as the Gillette Committee, made several recommendations on many aspects of the program, including organizational structure and management oversight. These recommendations were in large part responsive to Schriever's desire for simplifying the organization supporting the program.

Obtaining resources and services from multiple external organizations involved in the program required extensive review and approval processes. When Schriever had all the administrative processes for approval within DOD and the Air Force charted, the product was so complicated it became known as the "spaghetti chart."[42] The Gillette Committee recommendations intended to streamline this cumbersome labyrinth of processes. The Air Force and the Office of the Secretary of Defense implemented the Gillette Committee's recommendations quickly. Each established a committee, chaired by the secretaries and manned by the affected assistant secretaries, to serve as the single review and approval authorities for their respective organizations.[43] The membership of the AF Ballistic Missiles Committee, chaired by the

---

[40] Strategic Missile Evaluation Committee, Recommendations of the Tea Pot Committee, 261.
[41] Trevor Gardner, Assistant Secretary for Research and Development, Department of the Air Force, to Hyde Gillette, Deputy for Budget, Department of the Air Force, memorandum, 13 September 1955 in Jacob Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960* (Washington DC: Office of Air Force History, 1990), 269.
[42] Hughes, *Rescuing Prometheus*, 16.
[43] Neufeld, *Bernard A. Schriever: Challenging the Unknown*, 16.

Secretary of the Air Force, included three civilians and one officer: Assistant Secretary for Research and Development, Assistant Secretary for Materiel, Assistant Secretary for Financial Management, and Assistant Chief of Staff for Guided Missiles.[44]

Under the revised process, the Ballistic Missile Committees reviewed and approved an ICBM Development Plan. This document, produced annually, became the basis of authorization for all program actions covering programming, budgeting, facility planning, test scheduling, aircraft allocating, financial planning, and status reporting. When approved by the Secretary of the Air Force, the Development Plan was "the only authority under which all other actions of the Air Force, including programming, budgeting, and financial actions, would be implemented."[45] The new procedures reduced the review and approval process for all functional aspects to one document and two committees. This reduced the number of offices with independent or separate review responsibility within the Headquarters USAF from fifteen to two.[46] Beard attributed the success of the ICBM programs after 1955 to the procedures implemented as a result of the Gillette Committee because they allowed "bypassing of the normal AF review system."[47]

Actions in the ICBM Program

The Atlas program's chance for success was enhanced by crafting a particular organizational structure, differentiating the new mission at a high level, and insulating it from much of the rest of the Air Force. The service established WDD based on actions initiated by its civilian leadership and according to the recommendations of the Teapot

---

[44] Donald A. Quarles, Secretary of the Air Force, to Assistant Secretaries for Research and Development, Financial Management, and Materiel, Chief of Staff of the Air Force, memorandum, 14 November 1955 in Jacob Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960* (Washington DC: Office of Air Force History, 1990), 312-313.
[45] Quarles, memorandum, 14 November 1955, 279.
[46] Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960*, 310-311.
[47] Beard, *Developing the ICBM*, 217.

Committee.[48] The specific recommendations for the organization stemmed from what Beard called the committee's fear "that it would be delayed, if not actually sabotaged, if left to the normal operations of the Air Force."[49]

Schriever took additional actions ensuring the independence of the organization. In agreeing to take command of WDD, Schriever asked Gardner for and was granted full authority over the project without interference from the Pentagon.[50] He also relocated the program from Wright-Patterson Air Development Center in Dayton, Ohio, which was the traditional home of AF research and development. He chose suburban Inglewood, California, in order to be close to the program's primary contractors. The new location also represented a clean break from previous efforts. Gardner noted that Schriever's move to the west coast took the program as far as possible away from the Pentagon.[51] The building WDD occupied was not surrounded by military guards or a fence. It was an old private-school building. Schriever moved into the principal's office and made use of the chapel as a conference room.[52] To avoid undue attention, all military members assigned to WDD wore civilian clothes.[53] The location, building, and prescribed dress all insulated WDD from its ties with the rest of the Air Force.

Organizationally, WDD was not just another research and development program under ARDC. The unit was directly subordinate to a major command, but Schriever commanded WDD and simultaneously also held the position of Assistant to the Commander, ARDC. This additional authority allowed him to bypass some of the ARDC

---

[48] Senate, *Inquiry into Satellite and Missile Programs*, 989.
[49] Beard, *Developing the ICBM*, 235.
[50] John Clayton Lonnquest, "The Face of Atlas: General Bernard Schriever and the Development of the Atlas Intercontinental Ballistic Missile, 1953-1960" (PhD diss., Duke University, 1996), 112-113.
[51] Lonnquest, "The Face of Atlas," 114.
[52] Lonnquest, "The Face of Atlas," 114-115.
[53] Schwiebert, *A History of the US Air Force Ballistic Missiles*, 79-80.

bureaucracy.[54] Enhanced by his promotion to major general, access to senior leaders allowed Schriever to deliver his own message directly without filtering through several layers of the chain of command.[55]

Schriever established WDD and its successor organization, the Ballistic Missile Division, to fit the particular demands of the program. The unit was not organized by function. A functional approach would have simply tried to deliver a technology or a weapon. Instead, it was organized by product. The unit resembled a Weapon System Project Office, in which representatives of Air Materiel Command, Air Research and Development Command, and the eventual using command coordinate their efforts for the total weapon system.[56] The authority to see the project through to initial operating capability gave the Ballistic Missile Division enhanced power in the AF system.[57] This authority made the organization responsible for providing Strategic Air Command a functioning weapon system, including "development, production, maintenance, training, delivery, and support."[58] This responsibility to deliver a complete, operational, long-range ballistic-missile weapon system typifies organizing by product. With high-level differentiation and organization by product, changes in oversight further accelerated the program.

When AF leaders implemented the Gillette Committee recommendations, they further insulated the Atlas program from influence by the rest of the Air Force. The Committee thus reduced administrative interference and delays. For example, before

---

[54] Jacob Neufeld, *Bernard A. Schriever: Challenging the Unknown* (Washington DC: Office of Air Force History, 2005), 10.
[55] Schriever personally briefed Gardner, the National Security Council, and Congress. See Hughes, *Rescuing Prometheus*, 103, 105; and Senate, *Inquiry into Satellite and Missile Programs: Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services*, 85th Cong., 1st and 2d sess., 1958, 989-1004.
[56] Witze, "The USAF Missile Program," 171, 173.
[57] Schwiebert, *A History of the US Air Force Ballistic Missiles*, 101.
[58] Schwiebert, *A History of the US Air Force Ballistic Missiles*, 110; Claude Witze, "The USAF Missile Program: A Management Milestone," in Schwiebert, *A History of the US Air Force Ballistic Missiles* (New York: Frederick A. Praeger, 1965), 173-174.

implementation, acquiring industrial facilities required coordination and approval from several organizations. Military construction, a separate category, required a separate review and approval process. The Gillette Committee changes eliminated detailed line-item reviews by staff officers and approvals at multiple organizations. When facility requirements had been included in the Development Plan, the only review and approval required was at a very high level—the Ballistic Missile Committee chaired by the Secretary of the Air Force.[59]

Similarly, the Gillette Committee changes simplified and elevated the Atlas program budget review and approval process. The modifications removed multiple rounds of action-officer scrutiny at lower levels by including all budget requirements in the annual Development Plan. Additionally, the changes placed a barrier between ballistic missile funding and the rest of the AF budget. The Committee recommended to DOD that "the dollar requirements for the ballistic missile programs [be] separate from the dollar requirements or limitations applicable to any other AF program."[60] Separated from the rest of the AF budget and approved it in lump sum, ICBM program funding no longer had to compete with other AF requirements. The Gillette Committee's detailed recommendations described clearly that the ballistic missile "budget should be presented and considered as a separate package, outside and additive to any dollar requirements, goals, or limitations applicable to the remainder of the AF program" to avoid interference by other programs.[61] With this language, even the most ardent critics of ICBMs ought not have viewed the Atlas program as a funding threat to other programs or weapon systems. By placing the ICBM budget above and beyond the normal AF budget, the Gillette Committee eliminated the perception of

---

[59] Schwiebert, *A History of the US Air Force Ballistic Missiles*, 102-103.
[60] Donald A. Quarles, Secretary of the Air Force, to Chief of Staff of the Air Force, memorandum, 10 November 1955 in Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960*, 280.
[61] Quarles, memorandum, 10 November 1955, 292-293.

direct competition with other AF programs. In doing so, Schriever "managed to minimize the influence of AF and Pentagon middle management."[62]

In following the recommendations of the Teapot and Gillette Committees, the Air Force created a particular organization. This product-focused structure differentiated the Atlas program at a high level—a two-star general who was also the assistant to a four-star major command commander. Schriever further insulated ICBMs from much of the rest of the Air Force by creating a new organization, relocating it far from the Pentagon, locating the workers in a building off base, allowing them to wear civilian clothes, and eliminating many of the opportunities and incentives for bureaucratic resistance.

Schriever employed methods beyond organizational structure changes to accelerate the Atlas program. His bureaucratic acumen and exceptional ability to build personal relationships cannot go without mention as contributors to the program's success.[63] He also utilized concurrency and configuration management.[64] John Lonnquest argued that WDD's product focus, organizational structure, and expanded authorities made these management methods feasible. He concluded that these methods, when coupled with Atlas' particular circumstances, "gave the missile program powerful momentum."[65]

Analysis

As the Cold War developed in the years immediately following World War II, the United States and the Soviet Union took increasing

---

[62] Hughes, *Rescuing Prometheus*, 106.
[63] Neil Sheehan, *A Fiery Peace in a Cold War: Bernard Schriever and the Ultimate Weapon* (2009; repr., New York: Vintage Books, 2010), 249-253.
[64] Concurrency—"overlap between the development and production processes of a weapon system," Wayne G. Glass, *Concurrent Weapons Development and Production* (Washington DC: Congressional Budget Office, 1990), 7-8; Lonnquest, "The Face of Atlas," 161-175. Configuration management—"merg[ing] the planning work. . . around cost and schedule with the engineering processes used to review design changes," Howard E. McCurdy, *Faster, Better, Cheaper: Low-Cost Innovation in the US Space Program* (Baltimore, MD: The John Hopkins University Press, 2001), 85-86.
[65] Lonnquest, "The Face of Atlas," 174-175.

interest in the potential of nuclear-armed ICBMs.[66] Development of rocketry continued after the end of World War II. Events of the Cold War emphasized the potential of a nuclear ICBM as a tool of the state enabling a policy of deterrence. Due to the actions of civilian leadership, the Atlas program rapidly climbed priority lists, achieving the number one spot in the Air Force and eventually in the nation as well.

Despite increased priority and ground-breaking scientific developments, ICBMs received mixed support from the Air Force. Carl Builder claimed "American military institutions tend to continue those activities that have established a significant constituency within their ranks and, at the same time, tend to reject any new activities that might encroach upon those already established."[67] With a majority of senior military leaders having participated in strategic bombing during World War II, the Air Force reflected Builder's analysis. The newly independent service continued to coalesce around its self-perceived raison d'être, SAC's manned bombers. Statements of support for missile programs came either from the small minority of uniformed devotees like White and Schriever or capricious advocates more interested in keeping missile programs under AF control and out of the other services. The Atlas program faced institutional inertia favoring manned, nuclear bombers before the program was even underway and throughout its tenure.

In spite of this resistance, when the Air Force acted on the recommendations of the Teapot and Gillette committees, it set the Atlas program on a path to success. These studies, led and acted on primarily by civilians, allowed the program to overcome institutional inertia. The Teapot Committee recommendations led to the creation of WDD, differentiating the new, dissimilar mission at a high level. The Gillette Committee recommendations led to the Atlas program's freedom from

---

[66] The Soviets were interested in ICBMs before they had an atomic bomb. See McDougall, *The Heavens and the Earth*, 53.
[67] Carl H. Builder, *The Masks of War: American Military Styles in Strategy and Analysis* (Baltimore, MD: Johns Hopkins University Press, 1989), 43.

much of the labyrinth of review and approval processes. Consolidating these processes to one annual document for approval by a single committee chaired by the Secretary of the Air Force insulated ICBM development from institutional inertia. With a greatly reduced bureaucratic burden, Schriever was able to use AF facilities, personnel, and contracting mechanisms, as well as its management systems, to develop the ICBM without having to create new systems.

Organizing by product also contributed to the program's success. A functionally oriented organization fosters competing loyalties for individuals' commitment to their function and larger organizational goals. A product-oriented organization provides the opportunity for individuals to make completing the product their primary endeavor. The Atlas program, with its charge to deliver initial operating capability of the complete weapon system, required a product focus.

Developing the ICBM within the Air Force took not just an organization, but also a leader. Although personalities are excluded from the scope of this study, Schriever's influence as a bureaucratically and technically proficient manager and leader undoubtedly added to Atlas' success. Thomas Hughes labeled Schriever a "system builder," or one who "preside[s] over technological projects from concept and preliminary design through research, development, and deployment."[68] Beyond function, Hughes defined system builders as individuals who have "ability to construct or to force unity from diversity, centralization in the face of pluralism, and coherence from chaos."[69] John Law described the similarly applicable term of "heterogeneous engineering." In his view, "the environment within which a network is built may be treated as hostile, and heterogeneous engineering may be treated as the association

[68] Hughes, *Rescuing Prometheus*, 7.
[69] Thomas P. Hughes, "The Evolution of Large Technological Systems," in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, ed. Wiebe E. Bijker, Thomas P. Hughes, and Trevor J. Pinch (1987; repr., Cambridge, MA: The MIT Press, 1989), 52.

of unhelpful elements into self-sustaining networks that are accordingly, able to resist dissociation."[70] The organizational structure sufficiently liberated Schriever from the Air Force's institutional bounds to skillfully practice heterogeneous engineering and be a system builder for ICBMs.

The particular organizational structure, differentiated at a high level and organized by product, contributed to an extremely successful Atlas program. The Air Force fielded the first operational ICBM in August 1960 and expanded to thirteen squadrons by the end of 1962.[71] Compared to the B-52, the ICBM program took over four times as many engineering man-hours yet was operational in less than half the time.[72] The Atlas program overcame institutional inertia and was an unqualified success.

Muir S. Fairchild Research Information Center
Digital Collections
Air University–Maxwell AFB, AL

[70] John Law, "Technology and Heterogeneous Engineering: The Case of Portuguese Expansion," in *The Social Construction of Technological Systems*, 114.
[71] Neufeld, *The Development of Ballistic Missiles in the United States Air Force 1945-1960*, 186.
[72] Hughes, *Rescuing Prometheus*, 138; Beard, *Developing the ICBM*, 201.

Conclusions

No human endeavor can be reduced to a single predictor of success. Nevertheless, searching for significant contributors to success or failure can be profitable. The case studies explored here suggest organizational structure can have a considerable influence on the success of a military institution, especially when it is adopting a new, dissimilar mission.

Counterinsurgency in the US Army--Vietnam

When President Kennedy gave the US Army the dissimilar mission of counterinsurgency, Army leadership made organizational structure decisions that limited the Army's capability to succeed in Vietnam. The Army's emphasis on conventional operations hindered the development of counterinsurgency capabilities. The institutional preference for mid-to-high-intensity conflict was found throughout the Army. Army leaders chose to differentiate the new counterinsurgency mission at a low level in its hierarchy. They also chose to organize this capability functionally, opening it to competition against the Army's traditional functions. Thus, Special Forces became the only dedicated counterinsurgency force. The commander of the Special Warfare Center in charge of the SFGs was a brigadier general. Furthermore, on the Army Staff, the Special Warfare Directorate fell subordinate to the Deputy Chief of Staff for Operations.

The Army entered Vietnam unprepared for the counterinsurgency it faced. Before the war, Army leaders ignored recommendations from the Stillwell Report and the Howze Board calling for force structure changes to emphasize counterinsurgency. The Army did not organize or train for counterinsurgency operations before the war and had little success in Vietnam beyond tactical engagements.

Additionally, MACV subordinated counterinsurgency capabilities to conventional operations. The success of the Strategic Hamlet program supported by Green Berets was due in part to its control by the CIA,

external to Army influence. When MACV took control of the program, it shifted the emphasis away from traditional counterinsurgency doctrine to an offensive, conventional approach and vitiated the program. Corps senior advisers maintained operational control of Special Forces detachments, the only dedicated force trained in counterinsurgency. CORDS provided representation of the pacification program at all levels of MACV command, so that its leaders were always in a subordinate role. This structural subordination allowed the conventional mentality of Army leaders to prevail. In sum, the Army's force structure decisions differentiated counterinsurgency forces at too low a level to overcome its institutional inertia.

US Air Force ICBM

The geopolitical climate of the Cold War and action by civilian leaders gave the Air Force responsibility for a dissimilar mission to develop and field ICBMs. The Atlas program attained the highest priority in the Air Force and the nation but still received mixed support from the Air Force. Except for a few staunch supporters, the majority of AF uniformed leadership did not fully back ICBMs.

Most AF senior military leaders had participated in strategic bombing during World War II and viewed SAC's manned bombers as the hallmark of the newly independent service. The bomber generation sided with AF ICBM advocates only as much as necessary to keep long-range missile programs away from the other services. But within the Air Force, their tolerance for ICBM development was proportional to how much they perceived it as a threat to manned nuclear bombers. Even with the nation's highest priority, the Atlas program faced the challenge of AF institutional inertia.

Organizational structure decisions helped the program overcome that inertia. WDD, the unit responsible for ICBM development, was just below a four-star major command and commanded by a major general who was also the assistant to his four-star supervisor. Schriever's

access to senior leaders allowed him to deliver his own message directly to AF leaders, without it being filtered through several layers of bureaucracy. The recommendations of two studies, led and acted on primarily by civilians, further aided this effort. The Teapot Committee led to the creation of WDD, differentiating the dissimilar mission at a high level. The changes from the Gillette Committee recommendations unbound the Atlas program from much of the impedance of review and approval processes. With one annual requirements document and a single committee chaired by the Secretary of the Air Force to approve it, the new structure insulated the Atlas program from institutional inertia.

With the streamlined process, Schriever made use of AF facilities, personnel, and contracts to develop the ICBM without having to create new systems. Schriever, working in this environment as a system builder and heterogeneous engineer, applied his superb interpersonal, bureaucratic, leadership, and management skills. The organizational structure enabled him to operate effectively, but his individual contribution was a definite factor in the program's success.

The Air Force differentiated its dissimilar mission at a high level and organized by product. The product orientation served to downplay functional perspectives and provided additional focus on bringing the weapon system on line. This organizational structure created an environment in which made the most of Schriever individual talents. Consequently, the Atlas program overcame the Air Force's institutional inertia. The result was development and fielding of the ICBM as a new weapon system in a remarkably short span of time.

Comparison

Although they come from two different services and from opposite ends of the spectrum of conflict, the two studies are remarkably similar in their circumstances. In both instances, civilian leadership assigned the services a new, dissimilar mission. In each case, the services had some limited exposure and interest in the new mission but were not yet

committed to it on any significant scale. Both services reacted in a predictably and reflected Builder's observations that a military institution will prefer activities already well established by the majority of its members.[1]

Builder further claimed a military institution will rebuff any new activities posing a threat to its preferred mission.[2] The Army preferred mid-to-high-intensity conventional warfare and was not interested in counterinsurgency warfare, despite its public acknowledgement of the president's directives. Likewise, the Air Force made the Atlas program its top priority but only supported the program when it did not threaten the budget for manned nuclear bombers. Both services displayed significant institutional inertia.

So why did one succeed and the other fail? The evidence seems to support the assertion that organizational structure was the one difference between the two cases that contributed most to the different outcomes. Edmund Beard concluded, "a revolutionary new weapon may be subordinated to outdated doctrine or methods if it is not assigned to an agency designed to foster it."[3] The Air Force, based on civilian recommendations and direction, established WDD to develop and field ICBMs. This high level of differentiation protected the new mission from institutional inertia while allowing Schriever to exploit existing AF assets. On the other hand, the Army differentiated its new counterinsurgency mission at a low level, allowing the predominant conventional perspective to crowd it out. The vertical level of differentiation for the new missions was only one among many variables in these studies. However, where the differentiation occurred at a sufficient level to overcome institutional inertia, the new, dissimilar mission was successful.

---

[1] Carl H. Builder, *The Masks of War: American Military Styles in Strategy and Analysis* (Baltimore, MD: Johns Hopkins University Press, 1989), 43.
[2] Builder, *The Masks of War*, 43.
[3] Edmund Beard, *Developing the ICBM: A Study in Bureaucratic Politics* (New York: Columbia University Press, 1976), 235.

The method of departmentalization was an additional factor. The Army organized its counterinsurgency capability by function, assigned it to Special Forces, and saw it crowded out by preferred traditional functions. Schriever chose to organize the Atlas program by product. The additional emphasis provided by organizing by product, which can subdue functional loyalties, seems to have contributed to the program's success. The evidence considered here follows the predictable advantages and disadvantages of the different departmentalizing methods. However, the evidence is not sufficiently conclusive to assign a direct causal relationship to the method of departmentalizing.

Conclusions

The findings from the case studies allow for several conclusions. Any inferences from this study must be confined within its limits. This study excludes several factors, which could influence organizational structure decisions. Specifically, personalities, politics, promotion paths, and the need for technically competent leaders are all worthy considerations on which this analysis did not focus. This study also only considers a hierarchical organizational structure, although military forces are not strictly bound to this system. Within those contextual limitations, analysis and comparison of the case studies reveal the following conclusions for organizing military forces for a new, dissimilar mission:

- Incorporating a dissimilar mission into an existing organization rather than creating a new organization provides efficiency in administration. This action leverages existing processes, personnel, leadership, and administration leading to quicker action.
- Institutional inertia is a powerful factor in organizational change, especially when an established military activity is concerned.

- Horizontal differentiation of a dissimilar mission must occur at a sufficiently high level to insulate it from the adverse effects of institutional inertia.

Application

Decades have passed since the first ICBM reached operational capability and US troops left Vietnam. These experiences offer just two examples of dissimilar missions, but history is full of them. Dissimilar missions come in the form of new technologies. Before the ICBM, there were crossbows, breech-loading rifles, and airplanes. Dissimilar missions can also come from new methods of employing force. Along with counterinsurgency, differing methods from history include naval warfare, mounted warfare on horseback, and armored warfare with tanks. Each of these technologies and methods were new at one time, and the future is full of possibilities heretofore unthinkable. Although not exactly new, nuclear operations, cyber warfare, unmanned vehicles, and space operations warrant potential consideration as dissimilar missions. A challenge for the future is to consider the lessons of the past and embrace new technologies and methods to enhance national security. To do so effectively, leaders must appreciate the impact organizational structure can have on the success of dissimilar missions.

The Air Force's current organization for cyberspace capabilities provides an excellent contemporary example of dissimilar missions. 24th Air Force, the unit tasked to establish, operate, maintain, and defend AF networks and conduct "full-spectrum operations in cyberspace," is organized by function under AF Space Command.[4] The other numbered air force within AF Space Command is 14th Air Force, which "provides space capabilities for the joint fight through the operational missions of spacelift; position, navigation, and timing; satellite communications;

[4] US Air Force, "24th Air Force Fact Sheet," 1 April 2010.

missile warning; and space control."[5] These functions could easily be considered the traditional space functions, with cyberspace being new and different. The current commander of AF Space Command is a four-star general with a background predominantly in space functions.[6] 14th Air Force is commanded by a three-star general with a background involving space functions.[7] Organizationally equivalent, 24th Air Force is commanded by a two-star general with assignments related to cyberspace but also several assignments in space functions.[8] Just as the Air Force of the bomber generals displayed a tendency to gravitate toward manned strategic bombing and Army leaders in the 1960s thought in terms of high-intensity conventional conflicts, the informed observer would suspect that institutional inertia exists within AF Space Command. In that climate, does a numbered air force commanded by a two-star general establish differentiation at a sufficiently high level to insulate its dissimilar mission in cyberspace from possible institutional inertia and allow it to flourish to its full potential? Perhaps not.

Although the above answer is clearly not definitive, this question could and should be asked of all units at any level with dissimilar missions. Failing to ask this question and act upon the answer brings on risk. The risk is in allowing organizational structures, which foster institutional inertia, to impede the full development of a new, dissimilar mission at the detriment of national security.

---

[5] US Air Force, "Air Force Space Command Fact Sheet," 2 November 2011.
[6] US Air Force, "Gen William L. Shelton," January 2011.
[7] US Air Force, "Lt Gen Susan J. Helms," June 2011.
[8] US Air Force, "Maj Gen Suzanne M. 'Zan' Vautrinot," October 2011.

Bibliography

Air Force Historical Research Agency. "Air Force Space Command Fact Sheet," 24 July 2008, http://www.afhra.af.mil/factsheets/factsheet.asp?id=10995.

Air Force Historical Research Agency. "Air Force Global Strike Command Fact Sheet," 17 July 2009, http://www.afhra.af.mil/factsheets/factsheet.asp?id=15047.

Air Force News Service. "Air Force Nuclear Enterprise Roadmap Report Calls for New Command, Headquarters Agency," 25 October 2008.

Allison, Graham T. and Philip Zelikow. *Essence of Decision: Explaining the Cuban Missile Crisis*, 2d ed. (New York: Longman, 1999).

Army Field Manual (FM) 3-24. *Counterinsurgency*, December 2006.

Beard, Edmund. *Developing the ICBM: A Study in Bureaucratic Politics* (New York: Columbia University Press, 1976).

Bijker, Wiebe E., Thomas P. Hughes, and Trevor J. Pinch, ed. *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology* (1987; repr., Cambridge, MA: The MIT Press, 1989).

Bousquet, Antoine. *The Scientific Way of Warfare: Order and Chaos on the Battlefields of Modernity* (New York: Columbia University Press, 2009).

Builder, Carl H. *The Masks of War: American Military Styles in Strategy and Analysis* (Baltimore, MD: Johns Hopkins University Press, 1989).

Cable, Larry E. *Conflict of Myths: The Development of American Counterinsurgency Doctrine and the Vietnam War* (New York: New York University Press, 1986).

Callwell, C. E. *Small Wars: Their Principles and Practice*, 3d ed. (1890; repr., Lincoln, NE: University of Nebraska Press, 1996).

Clarke, Jeffrey J. *Advice and Support: The Final Years, 1965-1973* (Washington DC: Center of Military History, 1988).

Clausewitz, Carl von. *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976).

Collins, Joseph J. "Afghanistan: Winning a Three Block War," The Journal of Conflict Studies 24, no. 2 (2004).

Copp, DeWitt S. *A Few Great Captains: The Men and Events That Shaped the Development of US Air Power* (McLean, VA: EPM Publications, 1980).

Crane, Conrad C. *American Airpower Strategy in Korea, 1950-1953* (Lawrence, KS: University Press of Kansas, 2000).

Crisp, SFC Jeremy D. "Green Berets Honor President Kennedy in Ceremony," 18 November 2011, US Army, http://www.army.mil/article/69566/Green_Berets_honor_President_Kennedy_in_ceremony/ (accessed 21 February 2012).

Davis, MAJ Timothy C. "Building the Iraqi Army: Teaching a Nation to Fish," (research paper, Quantico, VA: Marine Corps Command and Staff College, 2005).

Department of Defense. "Cyber Command Fact Sheet" (Washington, DC: Office of Public Affairs, 13 October 2010).

Department of Defense. *Department of Defense Strategy for Operating in Cyberspace* (Washington, DC: Secretary of Defense, July 2011).

Department of the Air Force. "1907-1947—The Lineage of the US Air Force" (Joint Base Anacostia Bolling, DC: Office of Public Affairs, 13 October 2010).

Department of the Air Force. "1947—The National Security Act of 1947" (Joint Base Anacostia Bolling, DC: Office of Public Affairs, 28 April 2011).

Doughty, MAJ Robert A. *The Evolution of US Army Tactical Doctrine, 1946-76* (Fort Leavenworth, KS: Combat Studies Institute, August 1979).

Elkins, Arthur. *Management: Structures, Functions, Practices* (Reading, MA: Addison-Wesley, 1980).

Freedman, Lawrence. *The Evolution of Nuclear Strategy*, 3d ed. (New York: Palmgrave Macmillan, 2003).

Galula, David. *Counterinsurgency Warfare: Theory and Practice* (1964; repr., Westport, CT: Praeger, 2006).

Glass, Wayne G. *Concurrent Weapons Development and Production* (Wasghington DC: Congressional Budget Office, 1990).

Gorn, Dr. Michael H., ed. *Prophecy Fulfilled: "Toward New Horizons" and Its Legacy* (Washington DC, Air Force History and Museums Program, 1994).

Howze, LTG Hamilton H. president, Special Warfare Board, to commanding general, US Continental Army Command, memorandum, "A Study to Inquire Into All Aspects of Special Warfare Operations," 28 January 1962.

Hughes, Thomas P. *Rescuing Prometheus* (New York: Pantheon Books, 1998).

Joint Publication (JP) 1. *Doctrine for the Armed Forces of the United States*, 2 May 2007 with Change 1, 20 March 2009.

Joint Publication (JP) 5-0. *Joint Operation Planning*, 11 August 2011.

Kelly, COL Francis J. *US Army Special Forces, 1961-1971* (Washington DC: Center of Military History, 1973).

Kennedy, John F. "Remarks at West Point to the Graduating Class of the US Military Academy," 6 June 1962, http://www.jfklink.com/speeches/jfk/publicpapers/1962/jfk226_62.html.

Kennedy, John F. "Special Message to the Congress on the Defense Budget," March 28, 1961, http://www.presidency.ucsb.edu/ws/index.php?pid=8554&st=&st1=#axzz1my6MI5rs.

Komer, Robert, W. *Bureaucracy at War: US Performance in the Vietnam Conflict* (Boulder, CO: Westview Press, 1986).

Krepinevich, Andrew F., Jr. *The Army and Vietnam* (Baltimore, MD: John Hopkins University Press, 1986).

Lawrence, T.E. *Seven Pillars of Wisdom* (London: George Doran, 1917).

Longoria, SSgt R. Michael. "Joint Task Force Airmen Save Lives in Iraq," 28 December 2010,

http://www.af.mil/news/story.asp?id=123236363 (accessed 7 April 2012).

Lonnquest, John Clayton. "The Face of Atlas: General Bernard Schriever and the Development of the Atlas Intercontinental Ballistic Missile, 1953-1960" (PhD diss., Duke University, 1996).

Lyle , TSgt Amaani. "Air Force Global Strike Command Activated," 10 August 2009, http://www.af.mil/news/story.asp?id=123162363.

McCurdy, Howard E. *Faster, Better, Cheaper: Low-Cost Innovation in the US Space Program* (Baltimore, MD: The John Hopkins University Press, 2001)

McDougall, Walter A. *The Heavens and the Earth: A Political History of the Space Age* (1985; repr., Baltimore, MD: Johns Hopkins University Press, 1997), 96.

McNamara, Robert S. and Brian Van De Mark. *In Retrospect: The Tragedy and Lessons of Vietnam* (New York: Times Books, 1995).

Nagl, John A. *Learning to Eat Soup with a Knife: Counterinsurgency Lessons from Malaya and Vietnam* (Chicago: University of Chicago Press, 2005).

National Security Action Memorandum No. 2. "Development of Counter-guerrilla Forces," 3 February, 1961, http://www.jfklibrary.org/Asset-Viewer/B3leMaWRSkOnvMDbjd00Cw.aspx.

National Security Action Memorandum No. 52. 11 May 1961, 1.

National Security Action Memorandum No. 131. "Training Objectives for Counterinsurgency," 13 March 1962, http://www.jfklibrary.org/Asset-Viewer/BivdC1v8-0GxxLDyWr7pxw.aspx.

National Security Action Memorandum 362. "Responsibility for US Role in Pacification (Rural Development)," 9 May 1967, http://www.lbjlib.utexas.edu/johnson/archives.hom/nsams/nsam362.asp.

Neiberg, Michael S. *Warfare in World History* (New York: Routledge, 2001).

Neufeld, Jacob. *Bernard A. Schriever: Challenging the Unknown* (Washinton DC: Office of Air Force History, 2005).

Neufeld, Jacob. *The Development of Ballistic Missiles in the United States Air Force 1945-1960* (Washington DC: Office of Air Force History, 1990).

Norman, Lloyd and John B. Spore. "Big Push in Guerrilla Warfare," Army 12, (March 1962).

Oral History Interview of Col Ray E. Soper. vice commander, Ballistic Systems Division, by Harry C. Jordan, division historian, Ballistic Systems Division, 29 November 1966, typed transcript, Call K239.0512-783, IRIS 01000339, in USAF Collection AFHRA, Maxwell AFB, AL.

Robbins, Stephen P. *Essentials of Organizational Behavior*, 5th ed. (Upper Saddle River, NJ: Prentice Hall, 1997).

Rosen, Stephen Peter. *Winning the Next War: Innovation and the Modern Military* (Ithaca, NY: Cornell University Press, 1991).

Scanlan, Burt and J. Bernard Keys. *Management and Organizational Behavior* (New York: John Wiley & Sons, 1979).

Schriever, Gen Bernard A. (Ret). "Military Space Activities: Recollections and Observations." In *The USAF in Space 1945 to the Twenty-first Century*, ed. R. Cargill and Jacob Neufeld (Washington DC: Government Printing Office, 1998).

Schwiebert, Ernest G. *A History of the US Air Force Ballistic Missiles* (New York: Praeger, 1965).

Selected Statements on Vietnam: January – June 1967, Muir S. Fairchild Library, Maxwell AFB, AL.

Sheehan, Neil. *A Bright Shining Lie: John Paul Vann and America in Vietnam* (New York: Random House, 1988).

Sheehan, Neil. *A Fiery Peace in a Cold War: Bernard Schriever and the Ultimate Weapon* (2009; repr., New York: Vintage Books, 2010).

Sheehan, Neil et al. *The Pentagon Papers: as published by the New York Times* (New York: Quadrangle Books, 1971).

Smith, Gen Rupert. *The Utility of Force: The Art of War in the Modern World* (New York: Vintage, 2007).

Spires, David N. "The Air Force and Military Space Missions: The Critical Years 1957-1961." In *The USAF in Space 1945 to the Twenty-first Century*, edited by R. Cargill and Jacob Neufeld (Washington DC: Government Printing Office, 1998).Stilwell, BGen Richard G. to Secretary of the Army. "Army Activities in Underdeveloped Areas Short of Declared War," memorandum 13 October 1961, vii, http://cgsc.cdmhost.com/cdm/singleitem/collection/p4013coll11/id/1659/rec/8#img_view_container.

Tolson, LTG John J. *Vietnam Studies: Airmobility 1961-1971* (Washington, DC: Department of the Army, 1989).

US Air Force. "24th Air Force Fact Sheet," 1 April 2010.

US Air Force. "Air Force Space Command Fact Sheet," 2 November 2011.

US Air Force. "Gen William L. Shelton," January 2011.

US Air Force. "Lt Gen Susan J. Helms," June 2011.

US Air Force. "Maj Gen Suzanne M. 'Zan' Vautrinot," October 2011.

US Army Corps of Engineers. Gulf Region Division, "Gulf Region Division Update", 13 February 2009.

US Senate. *Inquiry into Satellite and Missile Programs: Hearings before the Preparedness Investigating Subcommittee of the Committee on Armed Services*, 85th Cong., 1st and 2d sess., 1958.

Van Creveld, Martin. *Command in War* (Cambridge, MS: Harvard University Press, 1985).

White, Lynn, Jr. *Medieval Technology and Social Change* (New York: Oxford University Press, 1962).

Witze, Claude. "The USAF Missile Program: A Management Milestone," in Ernest G. Schwiebert, *A History of the US Air Force Ballistic Missiles* (New York: Frederick A. Praeger, 1965).Worden, Col Mike. *Rise of the Fighter Generals: The Problem of Air Force Leadership 1945-1982* (Maxwell AFB, AL: Air University Press, 1988).

Wright, Dr. Donald P. and COL Timothy R. Reese. *On Point II: Transition to the New Campaign: The United States Army in Operation Iraqi*

Freedom, May 2003-January 2005 (Fort Leavenworth, KS: Combat Studies Institute Press, 2008).

Zhang, Xiaoming. *Red Wings over the Yalu: China, the Soviet Union, and the Air War in Korea* (College Station, TX: Texas A&M University Press, 2002).

Muir S. Fairchild Research Information Center
Digital Collections
Air University–Maxwell AFB, AL